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Automotive Daily News

CARS · SHOP EQUIPMENT · TRUCKS · AVIATION · PARTS · ACCESSORIES · TIRES

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Retail Car Financing Advanced Sharply in April; Wholesale Off

New Car Sales Gained, With Trend Toward Lower Price Range; Used Car Sales Also Showed Increase

Washington, June 6.—Retail automobile financing of automobiles advanced strongly in April as compared to March, with buying of new cars increasing very heavily as compared to the previous four weeks.

Retail financing for April amounted to $56,428,220 as compared to $51,148,285 for March. Of this amount $31,838,007 went to new car buying as compared to $26,887,515 in March. Used car buying took up $23,076,622 which does not contrast so strongly with the $22,779,892 registered in March.

Wholesale financing for April dropped off somewhat, amounting to $33,905,947 in comparison to $34,121,364 in March.

The total number of cars financed in April was 155,743 in comparison to 140,799 in March. The new cars financed amounted to 57,665 in comparison to 46,234 for the previous month, while used cars numbered 93,446 as compared to 90,121 in March.

The average price per car remained practically stationary, standing at $362 as compared to $363 for March. But a trend toward the lower priced end was noted in the buying of new cars where the average price for April was $552 as compared to $582 for March. The average price of used cars also dropped slightly, amounting to $247 for April as against $253 in March.

Of the total number of cars financed in April, 37.03 per cent. were new cars, 60.0 per cent. used cars and 2.97 per cent. were unclassified.

Wholesale financing of cars for the first four months amounted to $136,147,459 for the first four months of 1932, in contrast to $224,261,690 for the same period of 1931 and $276,572,660 for the first four months of 1930.

Retail financing for the first four months of 1932 has amounted to $196,836,264. in comparison to $332, 801,495 for the same period of 1931 and $429,136,597 for the first four months of 1930. Financing of new cars for this period amounted to $105,743,302, in comparison to

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DE VAUX EXPANDS IN ST. LOUIS AREA

St. Louis, Mo., June 6.—H. J. Burgdorf, Continental-De Vaux distributor for the St. Louis territory, says that there has been more activity in that region during the last six weeks than at any time during the past year.

Indicative of this statement, Burgdorf announces the appointment of five new dealers to handle the Continental-De Vaux franchise under him. The new points closed are: Mueller's Garage, De Sota, Ill.; E. R. Shade Sales and Service, St. Louis., Mo.; Dietz & Rawson Motor Company, East St. Louis, Ill.; Fischers Garage, Perryville, Mo., and thhe Batchtown Motor Company, Batchtown, Ill.

STUDEBAKER SHOWS 17% GAIN IN 5 MONTHS IN CANADIAN SALES

Walkerville, Ont., June 6.—"With May totals now available, the Studebaker Corporation of Canada, Ltd., continues to show increases in both unit and dollar volume for five months of 1932, as compared to the same period of 1931," Mr. D. R. Grossman, vice-president and general manager, announced here today. "We are particularly pleased with Rockne sales," said Mr. Grossman, "for the complete line of Rockne models has only recently been available to dealers. Rockne volume has been increasing steadily and the Rockne has become of major importance in our line.

"Pierce-Arrow sales in May were above April, indicating an increasing demand for these famous cars."

A 17 per cent. sales increase was registered by the Studebaker Corporation of Canada, Ltd., for five months of 1932 as compared to 1931.

STUDEBAKER EXPORT SALES TOP LAST YEAR

South Bend, Ind., June 6.—Studebaker and Rockne passenger car shipments to export dealers for the first five months of the year exceed those for the same period in 1931 by 1 per cent., Arvid L. Frank, vice-president and general manager of the Sturebaker Pierce-Arrow Export Corporation, announced today. "As against our increase, exports for the industry are off nearly 60 per cent.," he said.

"In addition to our increase in passenger car exports, we also registered a large gain in truck exports during May. The acceptance accorded the improved trucks introduced in January is indicated by the fact that over 30 per cent. of the year's truck business is accounted for by May shipments."

CINCINNATI SALES IN MAY TOP APRIL 26%

Cincinnati, June 6. — Hamilton county automobile sales in May showed an increase of 26.8 per cent. over April, lending encouragement to distributors and dealers who foresee a much greater increase in the June volume. May figures show a decrease of 572 new car sales, compared with May, 1931.

The bright spot as seen by deal-

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Ford Now Sets June Production Figure at 112,180 Vehicle Units

This Is 10,000 Better Than Previous Estimate; Announces 72,140 Unit Output in May; Chevrolet And Plymouth May Total 70,000 This Month

By CHRIS SINSABAUGH

Detroit, June 6.—Ford production for June now is expected to be at least 2,000 more than forecast by the company ten days ago. An official statement from Dearborn today gives us a revised estimate of the possibilities of the present month. An output of 112,180 is called for in the schedules as they stand at this writing, more than 2,000 above a previous prediction.

Coupled with this statement is the official information that Ford's world production in May was exactly 72,140 units, which is even better than the guesses made by the forecasters. It is significant that this is the first statement of actual production that the Ford company has issued since this time last year, showing that Dearborn and its allied forces are getting back to normalcy.

While neither Chevrolet nor Plymouth has issued any statement as to what is planned for June, there are signs that indicate that both these big concerns will travel along at about the same pace as they have been going for the past two months. From information which comes to this writer it would seem as if both will come very close to May production. It is thought Chevrolet will be very close to 50,000, if not a shade better, while Plymouth ought to put out around 20,000, which was the May pace.

It is to be expected that both Chevrolet and Plymouth should be tapering off, for this is the time of the year when the industry begins to slow down. With Ford under present circumstances it is different. Ford is just getting going and may be counted on for big production for months to come.

The biggest producers in the industry, therefore, should account for at least 180,000 of the anticipated 210,000 production for June. It is encouraging, too, to know that Chevrolet and Plymouth are going so well. They should have a good month, although April most likely will be their peak month in the final analysis.

Other cheering news is found in

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INDIANA TRUCK REGULATION LAW CONSTITUTIONAL

Indianapolis, Ind., June 6.—That the Indiana state law limiting weight and size of motor trucks using the state highways will be enforced at an early date was made probable by announcement of a court decision finding the act to be in accordance with the Constitution.

The decision, formal entry of which was deferred on request of attorneys for the Central Transfer and Storage Company who obtained a restraining order against the state soon after January 1 when the measure was to have become effective, denies petition for a permanent injunction and dissolving the temporary order issued against state officials.

Public attention was recently focussed strongly upon the trucking situation when a twenty-four ton vehicle being operated through this territory by a Pittsburgh, Pa., dairy concern crashed through a bridge on one of the principal state

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CHICAGO A. T. A. WILL HOLD ANNUAL MEETING JUNE 15

Chicago, June 6.—The annual dinner and meeting of the Chicago Automobile Trade Association, originally set for June 13, has been changed to June 15, according to official announcement at headquarters of the association today. The affair will be held at the Lake Shore Athletic Club.

Business matters to come up will include the election of directors, who will meet about a month later to choose officers for the coming year, and a report on activities of the past twelve months by A. C. Faeh, general manager.

Two prominent speakers have been secured to address the meeting. They are Col. Robert Isham Randolph, former president of the Chicago Association of Commerce, head of the "Secret Six" and chief of operations for the 1933 world's fair here. Col. Randolph, a noted engineer, will discuss safety and traffic plans in the handling of visitors to the fair.

Alexander Karr, founded of the American Community Association, and a well known civic analyst, will also speak on the theme of leadership. The dinner preceding the addresses and business session will start at 6.30 p. m.

TENNESSEE GAS TAX COLLECTIONS INCREASE

Nashville, Tenn., June 6.—Gasoline tax collections for May were $1,002,580.30, as compared with revenues of $840,403.74 in May, 1931, it was announced today by the Department of Finance and Taxation.

EXECUTIVES REPORT USED CAR SALES AS BETTER THAN USUAL

Detroit, June 6.—Leading automotive sales executives in this city say that the situation in the selling field this spring has several unusual aspects. While new car sales are off by some 50 per cent. under the levels that held last year, used cars, especially in the price class up to $200, are selling better than normally. One company manufacturing a low priced car reports that its dealers in this territory are actually facing a shortage of used cars to sell at $200 or less.

The sales executives of the manufacturers here consider this strength in the used car market as a hopeful sign, indicating as it does that regardless of depression the American people still demands its motor transportation. When he lacks money for

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FLEETWOOD HEADS ENGINE REBUILDERS

Indianapolis, Ind., June 6.—C. A. Fleetwood of the Fort Dodge Machine and Supply Company, Fort Dodge, Ia., was advanced to the presidency of the Automotive Engine Rebuilders' Association in annual convention here. Mr. Fleetwood, who served as first vice-president last year, succeeded R. G. Patterson, head of the Piston Service Company of Indianapolis.

Other officers elected included J. L. Heckman, Chicago, first vice-president; T. P. Condon, Knoxville, Tenn., second vice president; Harold Philips, St. Louis, Mo., secretary, and C. W. Yount, of the Eagle

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FIRESTONE, SR., BIDS CONGRESS ADJOURN

Albany, N. Y., June 6.—The way will be cleared for business "to go ahead full steam" if Congress "packs up swiftly and goes home," according to Harvey S. Firestone, Sr.

The automobile tire maker said here that business will not recover until government extravagance is cut to the bone; Americans acclimate themseles to a different level of living and return to the farm "for health, courage, thrift."

STEEL PRICE BOOST REPORTED UNLIKELY

Chicago, June 6.—An advance in third quarter finished steel prices here, expressed as a possibility in May, seems unlikely as the time approaches for definite action by the mills. One jobber stated definitely that the mills are reaffirming second quarter price of 1.60 cents a pound Chicago for bars, shapes and plates.

One steel strip maker probably will make a definite statement early next week. This maker had definite intentions last week of advancing strip $1 a ton, but the failure of other products to move up may alter his plan. Nothing is available on sheet prices.

There is still a possibility that de-

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Here's Your Opportunity to Earn $100—Turn to Page 4

General Electric Men Will Speak at International Electric Congress

When the International Electric Congress meets in Paris July 4 to 12, a number of engineers from the General Electric Company are down to read papers. The following is a list of the subjects to be covered by the American delegation with a brief digest of the material that will be presented:

Electric Discharges in Gases at Low Pressures—Irving Langmuir.

An analysis of the behavior of electrons and positive ions when present in relatively large numbers in a gas at low pressures. Discussion of a relatively field-free region called a plasma, which has very different properties from the regions of strong field, called sheaths, which cover the electrodes and walls.

A New Water-Cooled Vacuum Tube Power Generator for High Frequencies—E. D. McArthur.

A presentation of essential data on a three-electrode vacuum tube particularly suited for the generation and amplification of alternating voltages at very high frequencies. The greatest usefulness of this tube is realized in the frequency band from 150,000 kc. (2 meters) to 40,000 kc. (7.5 meters).

Oil-Blast Principle of Arc Interruption—D. C. Prince.

Discussion of the three different methods of opening a circuit in circuit interrupting devices, recognized at present. Concludes that an a-c arc may be interrupted by inserting resistance, by introducing rectifier action and insulating the electrodes in a half cycle during which the rectifier holds current at zero, or by inserting insulation at and after the current zero at a rate equal to or greater than required to withstand the recovering circuit voltage. The oil circuit breakers analyzed appear to conform to the last method of operation, which is subject to quantitative determination and test verification.

Photoelectric Relays—W. R. King.

The actuation of an electric relay by light has practical advantages that account for its adoption in industry. The paper considers only the relays that are caused to open or close a circuit by a relatively large change in light intensity, explains their operation and predicts their ultimate use may become as common as magnetic switches are now.

Effect of Type of Circuits on Arcbacks in Mercury Arc Rectifiers—C. A. Sabbah.

Considers not only the rectifier, but also the circuit in which it acts; discusses the action in the rectifier and circuit; concludes that the peak inverse current rather than the peak inverse voltage in a circuit should be the determining factors in rating a rectifier, and that by proper coordination of circuits and anode material and physics and geometry of the tube several times the present rating may be obtained. Therefore, the generally accepted conception that lower frequencies are easier on rectifiers than higher ones is erroneous, because peak inverse currents are higher for lower frequencies in a given circuit.

Synchronous Motors for Municipal Pumping—A. E. Beardmore.

Outlines the advantages of synchronous motors for this application, discusses methods of control and types of motors available.

Motor Drives for High-Production Newspaper Presses—R. H. Rogers

Discusses an electrical tie-in system for segregated motor drives in such applications. Such drives have become necessary, and mechanical tie-in systems have many disadvantages.

Variable-Frequency Cane Roll Drive—R. H. Rogers.

Discusses the many advantages of

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STOCK CARS TO RACE AT ROBY SPEEDWAY

Chicago, June 6.—For the first time in the history of racing at the Roby Speedway here, several stock cars will be seen in competition on June 19. Three already signed, both of which competed at Indianapolis on Memorial Day, are the Hupp Comet piloted by Russell Snowberger, and the two Hudsons driven by Chet and Al Miller.

Efforts are being made to secure the entry of Cliff Bergere and the Studebaker which took third at Indianapolis. The Roby races are conducted under auspices of the American Automobile Association.

NEW TAX MOVE

Macon, Ga., June 6. — The city council recently passed on its final reading an ordinance to exact a fee of from 2½ cents a mile to 20 cents a mile for distances traveled on Macon pavement by motor vehicles operated for hire. The new ordinance was effective June 1.

TRENTON A. T. A. LUNCHEON

Trenton, N. J., June 6.—Members of the Trenton Automobile Trade Association participated in a luncheon meeting at the Carteret Club. William A. Weinmann, president, presided.

Have you a message for Engineers?

Engineers and production men of the industry will gather at White Sulphur Springs, June 12 to 17, for the summer meeting of the S. A. E.

Each day *Automotive Daily News* will cover the meeting editorially. Copies will be mailed to all important engineers, production men and other factory officials in the industry in addition to those who attend the meeting.

Please send space reservations early. Forms close two days preceding publication.

Publication Dates—June 14, 15, 16, 17

Automotive Daily News

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DEFINES LIABILITY FOR DAMAGE DONE BY EMPLOYEE'S CAR

Philadelphia, June 6.—When an employee uses his own automobile voluntarily in carrying on his employer's business, the car not being subject to the employer's actual or potential direction or control, the employer is not liable for damages to a third party caused by the employee's negligent operation of the vehicle, according to a recent decision of the Supreme Court of Pennsylvania. The case was entitled Wesolowski, etc., et al. vs. John Hancock Mutual Life Insurance Company.

Charles J. Adams, an agent of the insurance company, had an industrial debit in Philadelphia district covering less than a square mile. In covering his district he sometimes used his own car, which he maintained and operated at his own expense. The company did not require him to use a car, although the company's superintendent had informed him that "if you have one, you might as well use it."

The agent struck and seriously injured a minor and action was brought by the youth and his parents. Verdicts of $21,000 and $1,600 were returned in favor of the minor plaintiff and his parents, respectively, but the trial court entered judgment for the defendant notwithstanding the verdict on the ground that the doctrine of "respondeat superior" was inapplicable.

In affirming the decision of the lower court and adopting its ruling, the Supreme Court said "the precise point at issue under the facts at hand has not been settled by judicial decision in Pennsylvania, except as it was settled by the court below."

"To hold a master legally responsible for the act of a servant who is engaged in furthering his master's business and who while doing so negligently uses some instrumentality that carries him from place to place," ruled the court, "it must either be proved that the master exercises actual or potential control over that instrumentality, or the used of the instrumentality at the time and place of the act complained of must be of such vital importance in furthering the business of the master that the latter's actual or potential control of it at that time and place may reasonably be inferred."

GRAHAM-PAIGE MAY SHIPMENTS GAIN

Detroit, June 6.—An upward turn in retail deliveries during May is reported by Graham-Paige Motors Corporation. The month's total sales throughout the country showed a gain over April, but the increased rate of deliveries became sharply evident in the last two weeks of May, with an 18 per cent. gain over the previous two weeks.

The final week of May was the fourth best of the year in total deliveries, and at the close of the month the stock of new cars on hand as reported by dealers was the lowest since January. Factory shipments of new cars in May exceeded April.

In Detroit, Graham registrations for May reflected the national trend, with an increase of 26 per cent. over April, while the total of 333 cars for the first five months of the year is 19 per cent. ahead of the Graham total a year ago.

SERVICE TOOLS ASSOCIATES ORGANIZED IN NEW YORK

New York, June 6.—The Service Tools Associates has been formed in this city, with a membership embracing twenty-two of the leading automotive service tool markers. The organization will function as a sales promotion agency, through which the manufacturers will co-operate with their jobbers to develop the small tool business. The formation of this group follows a switch in small tool business from wholesalers to the wagon distributors and mail order houses.

Richard A. Picard of Picard-Sohn, Inc., the New York advertising agency, has been made secretary of Service Tools Associates and will direct its campaign.

SPARKS *from* DETROIT

Tagging the Tags
* * *
Business Builders
* * *
What I Missed
* * *
Truck Prices
* * *
Doughnut Steering
* * *
A Summer Santa
* * *

Chris Sinsabaugh—Detroit Editor

RIGHT in line with that story from Washington that there will be approximately 1,000,000 fewer cars operated this year than last, we have confirmation here in Michigan. Secretary of State Fitzgerald, basing his estimate on registration returns received so far, declares that at least 100,000 cars owned in the state are standing idle at the present time, largely because their owners are unable to pay tag fees.

Suggestions have been received that tags be sold on the installment plan, while others favor monthly reductions as the period of the tags' usefulness decreases. It also is advocated that the weight tax—55 cents a hundred pounds—be reduced and the revenue made up by increasing the gasoline taxes. Farmers favor this plan, claiming they use their cars less than city folk, so the weight tax hits them harder.

* * *

INGENUITY in digging up new business these hard times is not confined to the automobile industry, which is leading up to telling you of a clever idea in this line I have run into.

One of the members of our automobile family is about to celebrate its silver anniversary by issuing an interesting brochure, giving its history and the events that led up to its present prominence. I find now that a printer originated the idea. This printer dug through the archives at Lansing, found that this particular firm was in its twenty-fifth year, then suggested the brochure as a broadcasting measure. Result: An order of substantial size, for this veteran concern never does things in a half way manner, so that the presses will be busy for some time.

* * *

I MISSED the big opportunity of my life, I guess, in not going to the Indianapolis race, for now I find that Jean de Goveia, Pete Willis' news director, had it framed up for me to drive one of the new 320 horsepower Duesenbergs while I was in the Hoosier metropolis.

* * *

JEAN TOOK GAR WOOD for a ride in this baby which steps along at 130 m. p. h. and which can do 104 in second, and the motor boat champion became so enthused he declares the government should build two super transcontinental highways capable of speeds well over 100 m. p. h.

Which leads the publicist to predict that in ten years we'll have a driving speed of 75 to 85 and even the low priced cars will be able to beat 100. And he declares that in any industry there always is some manufacturer who goes a little further into the unknown and develops today for the limited few what the masses will want tomorrow. That seems to fit Duesenberg.

* * *

SOMEHOW OR OTHER I always stumble into something interesting in "Stewart News and Views," the house organ of the well known truck manufacturer. This time it is a paragraph showing that truck prices have decreased 40 per cent. in ten years. Whereas in 1921 the average retail price was $1,385, it now is $825. In the same period, the publication says, passenger car prices have dropped only 20 per cent.

* * *

WHEN WE GET DOWN to writing 1932 history and anticipating our children's children asking questions about the chronology of the doughnut tire, let's not forget the claim of Gemmer to being the first to offer a steering gear to accommodate the demands of the low-pressure tire. But mebbe when those children's children get asking questions the doughnut will be as passe as the fabric casing is today.

* * *

IT LOOKS to Frank Wiethoff, Rockne sales manager, as if there is a Santa Claus after all, although this is not the Santa Claus season. Going over the figures, Wiethoff finds that each of the ten-day periods in May exceeded its predecessor in the way of sales, that April was beaten on every count and that it looks at this writing as if June is going to be even better.

Retail Salesmen—This Is Your Page

This department is devoted to the interests of the retail sales division of the industry. Salesmen, this is your department. Automotive Daily News wants you to get something from this department that will help you in your work on the firing line. It wants you to pass on your own experiences, successes, failures to help your brother salesmen. Send in your story in the form of a letter, or even a postal card, and let us get it ready for publication. Your achievement or your mistake may help another salesman to make sales or avoid errors that cost you commissions.

Dealers read this page. Give us the benefit of your reactions on these problems that affect the work of your salesmen, the men on the firing line, the men who bring home the bacon or don't.

EVERY USED CAR IS COLD CASH

"You know," said the retail sales manager, "when you have been in this business as long as I have, you begin to look at every car you see running around the streets as so much cash. You forget the wheels and the engine and the upholstery as individual factors in fixing used car value and look at the ensemble as cold cash, representing the down payment on a new car.

"And that is a frame of mind that every salesman ought to cultivate. He ought to stop figuring used cars as "deals" or anything else but so much cold cash. He ought to keep always in mind that every used car represents cash to exactly the amount that it will bring in the open market at that time.

"The reason I say this is that many salesmen do not accept the appraiser's bid on a customer's trade-in with the best grace in the world. They try to make the prospect feel that they are leaning over to his side by an apologetic attitude on the appraiser's price as it comes to them on the appraisal sheet.

"Now, every salesman ought to realize that the appraiser is a skilled operator, trained for his job and hired to put a price on trade-ins that will keep the boss from losing money on them. He does not set his price low simply because he is mean and wants to cheat the salesman out of a sale. He doesn't do it just for fun. He sets his price at exactly what he believes the car will bring in the open market in its condition at the time he is figuring. He has to take into consideration the expense of reconditioning the car to make it salable.

"Just let the salesman remember that if he does not sell enough cars he will lose his job, and also that if the appraiser does not accurately figure out his allowances he will his job.

"By all and every means the salesman should back up the appraiser's allowance, selling the customer on the idea that he has been offered a fair and reasonable price for his old car.

"Most dealers have their appraisers quote a figure for trade-ins below the maximum that will actually be allowed. They key the figure so that the salesman will know that he may go $25 or $50 or $75 above the quoted allowance.

"This leaves the salesman a trading margin, but he has got to know how to use it if he is going to make it the lever that will close the deal. The salesman is making a mistake who immediately jumps to the maximum allowance with a, 'Now, Mr. Prospect, while our appraiser has set a figure of $450 on your car, I think I can do a little better than that. As a matter of fact, I know that by seeing the boss I can get him to raise the ante to $525.' He is making the prospect suspicious. The client immediately begins to think: 'These people are just a gang of traders. I think I'll shop around a bit more before I decide. If this crowd will give me 525, mebbe I can find somebody else who will allow me $550 or $600.' It doesn't take much to make a shopper's imagination run away with him.

"A good piece of advice to hand any retail automobile salesman is: Take everything calmly and quietly. Don't rush your prospect, and do not let him rush you. Have the whole transaction go along in an unhurried fashion. Drive home your points quietly, but with conviction. You believe the car you are selling is a good car; that it will give the buyer good, efficient and economical service. You believe that the appraiser has set a fair figure on the trade-in, a figure that will let your boss break even anyway on the transaction and stay in business to hold your job for you. You believe that the whole transaction, the allowance you are making on the old car and the prospect's acquisition of one of your new models will be a positive benefit to your customer. Your job is to get your prospect in the same way of thinking.

"When a salesman once learns how to use the tools at his command, an offer of $25 or $50 more by another dealership on the trade-in that is being offered by the client is not such a handicap as it might seem. But the salesman has got to know his job. He has got to handle the appraisal with diplomacy and good will or he will lose all the benefit of having learned to look on every used car as so much cold cash instead of a 'deal' or a 'trade-in'."

THREE N. J. BUS FIRMS CO-ORDINATE SERVICE

Hackensack, N. J., June 6.—Effective today, the Hackensack Coach Company, Inc., and the Public Service Interstate Transit Company, Inc., will, in the interests of improved operations, co-ordinate their bus services between Hackensack and New York city and between Dumont and New York city. In connection with the combined operations between Dumont and New York city, Public Service buses will be operated over the same route now taken by the Hackensack Coach Company buses. In addition, buses of both companies will use the same terminal and make the same stops.

EXECUTIVES REPORT USED CAR SALES AS BETTER THAN USUAL

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new cars it comes into the used car market to fill the gap.

Another condition in the sales field this year is a spottiness in demand far beyond any normal differences. In some cities sales are running pretty nearly even with last year's records, while in others the retail merchants cannot sell cars at any price. This state of affairs is obviously caused by local conditions. In places where local industry is doing fairly well the workers have money to invest in cars, while in other places business is so bad with plants and mills closed, that there simply is no money for buying even the lowest priced cars.

The employment situation in Detroit on May 31 was in better shape than for some time. The index of the Detroit Board of Commerce on May 31 stood at 69.6, the high water mark of the year, the previous high having been on February 15 when a figure of 69.4 was registered. On May 31, 1931, the index figures was 80.4. Employment too is very uneven. Some plants are going well and in others certain departments may be working seven days a week, while other divisions are entirely closed down. This uneveness in sales and employment is almost inevitable in the present general condition of the country.

O'NEIL PREDICTS HIGHER TIRE PRICES

Akron, O., June 6.—Ordinary business trends will cause inauguration of higher tire price schedules within a year, it is declared by William O'Neil, president of the General Tire and Rubber Company, here. "When commodity prices start on the upward swing automobile tire prices probably will rise much faster than those of other commodities," O'Neil said.

"Like many other things, rubber is being marketed at less than the cost of production. Rubber is, however, being produced at a price further below the cost of production than most other commodities. Rubber costs and tire costs probably will not go up until costs of other commodities start to rise, but then they will climb much faster. The government has set out to get $50,000,000 out of the rubber industry as Federal income. This certainly cannot come out of profits, so it must come out of increased prices."

SALESMAN MUST INTERPRET HIS ROLE CORRECTLY

Each new prospect places the automobile salesman in the position of an actor interpreting a new role, says George B. Carroll, veteran salesman for Packard Sales and Service, Inc., 350 George St., New Haven, Conn. Unless the salesman is able to interpret his role correctly his chances of selling the prospect are remote, Mr. Carroll added.

The salesman-actor has no opportunity for rehearsals. He is forced to change his interpretation much more frequently than a player in dramatic stock. He is not handed the lines, given an opportunity to memorize them and then sent out on the stage to play the part. His method of approach, "lines" and general demeanor are not fixed in advance. He steps before the hypothetical footlights "cold," not knowing what the reaction of his audience will be, and forced to feel his way.

"Buyers now are much more difficult to handle," Mr. Carroll said. "We haven't much trouble with our regular customers or repeats, and naturally the securing of new prospects is the real question. It is difficult to determine nowadays whether a prospect is good or not.

"I consider every caller a potential customer; at least treat him as such. I make it a point to talk along the line that he must know a good job when he sees it and is well informed generally on the modern trends in motor cars. It is always wise to make the caller feel that he has conferred a favor upon us by stopping in.

"It is important to grasp every opportunity that presents itself. If a man or woman stops even for a moment in front of the dealership, I go out with a catalogue in hand and invite him or her in. Following up even a slight manifestation of interest often brings a sale.

"These days and times demand more and more courtesy. The salesman must keep his best foot forward always. Service and more service is required not only to sell successfully but to hold the old customers."

Mr. Carroll has been selling Packards in New Haven for the past eight years and has built up an unusually good record.

WHEN IT COMES TO SELLING THE APPRAISAL

From the Automobile salesmanship course, compiled by the La Salle extension university course, with the co-operation of the Chrysler Sales Corporation.

Since selling the prospect on the appraisal is in a majority of cases the critical point of your sale, you must watch yourself to see that you do not let it develop into a mental hazard. Forget that there is a trade-in involved. Concentrate on the new car just as you want your prospect to concentrate on it. Know definitely how to sidetrack any discussion of the prospect's used car until after the demonstration. Master the methods herein outlined for selling the appraisal and feel confident that you know how to answer any objections that your prospect may bring up even before he utters them.

For, instead of regarding the appraisal as an obstacle on which your sale may be wrecked, you should consider it one of the finest opportunities for closing the sale!

Any sale of the appraisal must be divided into two principal steps, as follows:

1. When showing your prospect that his old car no longer serves his purpose, tactfully bring out his lack of pride of ownership, comfort and convenience, satisfaction of affection, as well as his lack of gain and economy, protection and safety and the danger of having to take a loss on his car when he does trade it in for a new one, and

2. Show him that your appraisal valuation is right.

A word of caution becomes necessary at this point. An inexperienced salesman is likely to go too far when handling this matter of unselling the prospect on his old car. That is why we used the word "tactfully." But for any man who has studied this course carefully up to this point, it should not be a difficult matter to handle this process of dissatisfying the prospect without overdoing it and antagonizing him.

It will not be a difficult matter to convince him that his old car isn't "up to snuff," because he himself is more than half convinced that it no longer serves his purposes; otherwise he would not be in the salesroom asking you for an appraisal.

Now, besides the lack-of-pride factors, the old car certainly lacks both the comfort and convenience of a new one.

Your prospect, furthermore, no longer is obtaining complete satisfaction of his affection for his family by continuing to drive his old car. In fact, his family may have frequently requested him to get rid of the old car.

But no matter how well you have unsold your prospect on his old car and no matter how liberal an allowance your appraiser has made, your prospect seldom is satisfied. You'll have to convince him that your appraisal price is right.

Almost invariably he has an inflated idea of his car's market value, and it is very important for you to realize clearly what the factors are which magnify its resale value in his estimation. As a rule, they are:

1. A vivid mental picture of the price he paid and a foggy one of the car's depreciation from that price.

2. A desire or actual need for a sufficient amount to cover the down payment.

3. A competitor's or friend's optimistically high valuation.

4. A possible affection for "the old bus" which has served him faithfully.

In order to sell your prospect on your appraisal figure, therefore, it will be necessary to remove this fourfold magnifying glass and show him his car in its true light.

To do this you must prove to him as tactfully as possible that it is worth exactly what your dealer can get for it in the open market—no more, no less.

The first points you must show him, therefore, are the factors which govern the price that you can get for his car at resale, together with the factors which govern reconditioning, handling and advertising costs.

In other words, you must show him that the cash value of his old car is determined by the present condition of the car, cost of reconditioning, current selling prices of the same or similar cars, local supply and demand, seaonable fitness of the model, etc., etc.

INDIANA TRUCK REGULATION LAW CONSTITUTIONAL

(Continued from Page 1)

highways and caused renewed demand for regulation of truck weights and sizes on the roads.

Provisions of the act that say the highway department or other delegated authorities may issue operating permits for short periods for trucks that do not meet the law's requirements, the court held, is not a suspension, but it is merely a delegation of administrative functions. He also ruled that the law is not an arbitrary classification of trucks, and added there "are certain well founded reasons for making such exceptions as are necessary." Regarding the allegation that the state would be exercising unreasonable police power, the court said it has a right to regulate its highways. The judge said the law does not contravene interstate commerce laws and does not place an unfair burden on interstate commerce. The state may prescribe uniform regulations for the protection of its highways and in the interest of safety so long as they do not interfere with Federal regulations, he said. Limitations of the act included width eight feet, height twelve feet and length thirty-three feet.

The weights and size law was an especially serious blow at the trucking industry inasmuch as practically all central states overland hauling must pass through Indiana at some point. The plaintiff in the injunction procedure contended that enforcement of the law would make obsolete a great portion of the trucking equipment now in service.

SPEEDWAGON SALES UP 100% IN CHICAGO

Chicago, June 6.—Reo speedwagon and truck retail deliveries showed a gain of 100 per cent. during May over April in the area served by Thomas J. Hay, Inc., local distributor, according to announcement made today.

Appointment of the Finance Auto Sales, Inc., of this city as a new Reo dealer is also made known. This company, located at 2491 Milwaukee Ave., is headed by N. Board and A. W. Landstrom, well known for years in trade circles on the northwest side.

DAY-ELDER APPOINTS JERSEY CITY DEALER

Irvington, N. J., June 6.—F. T. Macrae, president of the National Motors Manufacturing Company, Irvington, has announced the appointment of the Phoenix Welding and Machine Company of Jersey City as Hudson county Day-Elder distributor. Harry Huff is president of the company and Gordon Thomas is sales manager. Display rooms are maintained at 401 Montgomery St., Jersey City.

Automotive Daily News

"Of, By and For the Entire Automotive Industry"

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Hugh Chalmers

IN the death of Hugh Chalmers the automotive industry has occasion to mourn the passing of another pioneer, who contributed magnificently to the development of the industry when it still was on trial as an experiment.

When Hugh Chalmers, in 1907, entered the industry, leaving a position of distinction with the National Cash Register Company, to cast in his lot with a comparatively untried business, the motor factories of America produced a total of 44,000 vehicles. Chalmers had the vision to see that sales volume could be developed by a manufacturer offering a car at a reasonable price. Coming from the well organized cash register company he realized that factory lay-out and equipment must be perfected to realize any plans for offering a low priced car. The Chalmers plant was a model not only for its time but for many years after, when it had passed into other hands. Within three years after Hugh Chalmers had been elected president of the company into which he had bought and which finally became the Chalmers Motor Company, the Chalmers car was one of the most popular in America.

During this formative period of the automotive industry, Hugh Chalmers was the beau sabreur of the sales division of the business. His work as a sales executive during this period stands out from the many distinguished records made by men who have since become famous in this field.

In 1916 Chalmers addressed a salesmen's convention in New York and in the course of his speech made a statement that deserves to be posted on every salesman's desk:

"The very first thing I would teach in any school would be the necessity for courtesy. The great prevailing fault among American salesmen and saleswomen is the fault of discourtesy. Deny it if you wish, but a thorough test will convince you of its existence. Allow me to lay stress upon this for a moment, because it is so important in all branches of business and in all walks of life. Courtesy costs nothing and yet it pays bigger dividends to the man or woman who possesses it than any other requisite they have."

The automotive industry does well to mourn the passing of a man who contributed to its formative period a great personality, a well known name and a splendid achievement.

Opportunity in 1932

WE talked recently with the executive in charge of service work for one of the largest automotive vehicle manufacturers and this man had some interesting things to say about his particular field:

"The service division of the industry has never before had such an opportunity as 1932 brings it," he remarked. "There are more cars needing servicing this year than at any time in history. I know that there are fewer cars in operation, but those that are running are older on the average by more than a year than is normally the case. This means nothing else but increased service. Even the man who runs his car until he has to have service must go to the shop more often now than he used to do. And most men have sense enough to know that servicing in time saves bigger troubles and bigger bills later on.

"I do not believe that all service men are realizing fully on their opportunity, but in our organization we are endeavoring in every way to impress on our dealers their chance to get business into their shops. We are urging advertising of all kinds and are emphasing the need for personal solicitation. So far our business has been running ahead of last year in the service division and we are going to boost it still further before the end of the year."

And that is a piece of advice that is universal in application to every man in the service branch of this great industry. Let the dealers mourn over decreases in new car sales. But let the service manager go out and bring home the bacon that spells the difference between loss and profit.

A. D. N. Offers Dealers $100 for Letter

This Newspaper Will Pay $100 for Best Letter of Month, $5 for Best Letter Each Day. Read Offer Below

In spite of the abnormally hard conditions existing in 1932, some dealers in this country are doing an excellent job. Some of them actually are exceeding the business done last year, though general automobile sales are running 50 per cent. behind the levels of 1931.

There must be a reason behind the success that these dealers are having in a year of grinding depression. Automotive Daily News wants to present the stories of why and how these successful dealers have done the job. It is, therefore, inaugurating a PRIZE CONTEST of comprehensive appeal. Read the rules of this contest and send in your entry.

Automotive Daily News offers a monthly prize of $100 for the best letter from any dealer who is exceeding in 1932 the business he did in 1931. The letter must tell how the dealer has managed to achieve his success so far this year. At the end of the month our check for $100 will be forwarded to the dealer whose letter has been adjudged the best one received.

Furthermore, Automotive Daily News will publish every day the best letter received that day and will pay the dealer writing it $5.

Get busy, you dealers who are grabbing success out of depression. Pass on your recipe to your fellows and make money out of doing it.

Ford Sets June Production Goal at 112,180 Vehicle Units

(Continued from Page 1)

the Ford statement. First. May saw an increase of 25,000 in employment, and at the present time all of Ford's thirty-two assembly plants in the United States are in operation, as are the main Canadian plant and its four assembly branches, and the Ford plants at Paris, France; Dagenham, England, and Copenhagen, Denmark.

"Within a week, other foreign plants at Antwerp, Belgium; Barcelona, Spain; Cologne, Germany; Istamboul, Turkey, and Yokohama, Japan, will be in production," the company says. "Before the end of June, other assembly branches at San Paulo, Brazil, and Buenos Aires, Argentina, will be producing the new Fords.

"During the past month Ford employment in the United States, including the main plant and assembly branches, was increased by 25,000, which does not include the increased employment by the companies supplying parts and materials. Employment is gradually being increased as production is stepped up and former employees are called back.

"In May an average of 400 employees were called back to work at Dearborn each working day of the month. The June employment increase has begun at 500 a day. The increase in employment both at Ford plants and in the factories of the suppliers, is believed to have been a considerable factor in industrial activity generally during May.

"Among the domestic Ford branches now in production is the new Ford plant at Seattle, the third new assembly plant to be opened on the Pacific coast in the last two years. The others are at Long Beach, Cal., near Los Angeles, and Richmond, across the bay from San Francisco."

COMING EVENTS

JUNE

8-11—**State College, Pa.** American Society of Mechanical Engineers, National Oil and Gas Meeting.
12-17—**White Sulphur Springs, W. Va.** Society of Automotive Engineers, summer meeting.
20-24—**Chicago, Ill.** Motor and Equipment Wholesalers Association, Edgewater Beach Hotel, summer conference.
20-24—**Atlantic City, N. J.** American Society for Testing Materials, annual meeting, Chalfonte-Haddon Hall.

JULY

3—**France.** Grand Prix Automobile Race.
5- 9—**Southampton, England.** Commercial Car Show.
9-16—**Belgium.** Grand Prix Automobile Race.
17—**Germany.** Grand Prix Automobile Race.
20-22—**Llandrindod, Wales.** Commercial Car Show.

OCTOBER

3- 7—**Washington, D. C.** National Safety Council, meeting.
3- 7—**Buffalo, N. Y.** National Metal Exposition, 174th Regiment Armory, W. H. Eisenman, 7016 Euclid Ave., Cleveland, director.
3- 7—**Buffalo, N. Y.** National Metal Congress. Sponsored by American Society for Steel Treating, with cooperation of American Society of Mechanical Engineers, Institute of Metals and Iron and Steel Divisions of American Institute of Mining and Metallurgical Engineers, American Welding Society, Wire Association.
13-22—**London, England.** Olympia Show.

CINCINNATI SALES IN MAY TO APRIL 26%

(Continued from Page 1)

ers, however, is the fact that April of this year showed a decrease of 55 per cent., compared with April, 1931, giving the May comparison between the two years a rather rosy hue.

Ford figures in April and May are hardly to be compared, inasmuch as Ford did not get into production to any extent until May, accounting for an increase of 238 Ford sales in May in excess of April. With 254, Ford led the thirty-two types represented last month, with Chevrolet a close second, with 236, and Plymouth third, with 211.

Significance attaches to the fact that all of the types which showed increases last month, compared with the same period a year ago, are included in the twelve types, which show increases for May over April. De Soto, Lincoln, Packard, Plymouth and Reo showed increases last month over May, 1931, as well as in May over April. Others in the latter category are Dodge, Essex, Franklin, Hupmobile, Nash, Pierce-Arrow and Willys.

USED CAR MARKETING MEETINGS THIS WEEK

Chicago, June 6.—Meetings to discuss used car merchandising and appraisals are to be held this week by dealers of Washington, D. C.; Baltimore, Md.; Wilmington, Del., and Charleston, W. Va., under auspices of trade associations in these Southeastern cities. At each of the sessions the speaker will be S. F. D. Meffley, sales manager of the National Used Car Market Report, Inc., publishers of the Blue Book, Red Book and other used car services for dealers.

The schedule of meetings includes Washington tonight, Baltimore tomorrow, Wilmington Wednesday and Charleston Thursday.

FLEETWOOD HEADS ENGINE REBUILDERS

(Continued from Page 1)

Machine Company, Indianapolis, treasurer.

New directors are Mr. Patterson, William A. Baker, Chicago; D. H. Goldman, Baltimore, Md.; L. C. Smith, Chicago; W. C. Hill, Jackson, Mich.; J. J. Eldridge, Cincinnati, O.; J. B. Cook of Memphis, Tenn., and P. C. Young, Toronto, Canada.

Many of the visiting engine men arrived in Indianapolis in time to attend the race and racing men were active in the sessions of the convention. Lee Oldfield, chairman of the Indiana section, Society of Automotive Engineers, and Fred S. Duesenberg, past chairman, were among the principal speakers heard by the rebuilders' association. The latter discussed the race track as an automotive proving ground.

STEEL PRICE BOOST REPORTED UNLIKELY

(Continued from Page 1)

velopments in the next ten days may warrant a change in present plans. No definite stand has been made on semi-finished prices, although one fabricator reported that while mills talked of a $2 advance on sheet bars, billets and slabs he believes they will be satisfied with an increase of $1.

NASH SHIFTS CHICAGO DISTRIBUTING COMPANY

Chicago, June 6.—Announcement was made here today that the Chicago Nash Company has been succeeded by Nash Sales, Inc., as distributor of Nash motor cars in this territory.

An automobile row showroom at the southeast corner of Michigan Avenue and 25th Street has been closed, and the company's entire sales and service activities are concentrated in the block-long three-story building on 24th Street between Indiana and Prairie Avenues, formerly occupied by the Chicago Nash Company.

Retail Car Financing Up Sharply in April

(Continued from Page 1)

$195,366,863 for 1931 and $269,179,607 for the first four months of 1930.

Financing of used cars totaled $85,644,326 in comparison to $129,178,282 for the first four months of 1931 and $145,833,656 for the corresponding period of 1930.

The average price of individual car financing during the first four months of 1932 has been $363. This compares to $387 and $419, respectively, for the same periods of 1931 and 1930. The average new car financed in the first four months of 1932 was priced at $569, comparing to $540 in 1931 and $556 in 1930. The average used car price was $252, in comparison to $271 in 1931 and $288 in 1930.

N. J. SENATE OPPOSES FEDERAL GAS TAX

Trenton, N. J., June 6.—The 1-cent gasoline tax, proposed by Congress and already approved by the United States Senate, is an invasion of a "heretofore exclusive field of state taxation" in the opinion of the New Jersey Senate.

The state Senate expressed its opposition to the levy in a resolution protesting against it as depriving New Jersey of revenue from the gas tax. The present state tax is 3 cents.

CLASSIFIED ADVERTISEMENTS IN THE AUTOMOTIVE DAILY NEWS BRING RESULTS

General Electric Men Will Speak at International Electric Congress

(Continued on Page 2)

this type of drive for the application in question (sugar industry). This drive supersedes wound-rotor induction motors operating on constant-frequency power supply.

Present Practice in Sectional Paper Machine Drives—R. H. Rogers.
Outlines the history of paper machine drives and the necessity for their improvement. Present methods are discussed, their advantages outlined and brief application data are given.

Electric Heat in the Annealing of Glass—R. H. Rogers.
Considers the importance in the manufacture of glassware or plate, of annealing; shows that electric heat for annealing, while perhaps more expensive than fuel-fired annealing, makes up the differential by other factors.

Measurement of the Dissipation of Vibrational Energy in a Steel Rod By Electrical Means—Arthur L. Kimball.
Discussion of a method of measuring the dissipation of energy produced during longitudinal vibration of frequency of about 4,000 cycles a second in a steel rod fifteen inches long and one-half inch in diameter, carrying laminated armatures on each end and supported at its middle node. Accomplished by determining the energy input required to maintain the vibration.

Commercial A-C. Time Service and Synchronous Motor Clocks—Henry E. Warren.
Reviews history of a-c. timekeeping, discusses types of motors for the purpose, outlines the advantages of such timekeeping over spring and weight-driven clocks.

Protection from Overvoltages on Power Systems—W. W. Lewis.
Shows that lightning is the most serious source of overvoltage, and discusses kinds and effects of strokes. Various kinds of protection are covered, including ground wires and lightning arresters for transmission lines. Station insulation practice is reviewed. Protection is also covered for distribution circuits and generators.

The Development of Electrical Machinery in the United States—P. L. Alger and F. D. Newbury.
The development of the important kinds of electrical machinery in this country is briefly described, especially in respect to volume of production, diversity of types, economy of design and improvements in performance. The paper is divided into two parts, the first dealing with generating apparatus and transformers and the second with motors. Each part is subdivided into sections dealing with the major types of equipment.

Radiothermy—W. R. Whitney.
Cites the employment of vacuum tubes in biological and therapeutic fields in the high-frequency oscillator, explaining the careful progress in the development of artificial fever until application was made to man. Explains results so far, mentions promising possibilities, points to direction further research should now take.

Review of High-Voltage Transformer Practice in the United States—F. F. Brand.
Discusses present and theoretical maximum voltage ratings, cooling trend, resistance to lightning, distribution of transient voltages inside windings, tap changing under load, and use of transformers connecting three circuits.

Modern X-Ray Tubes and High-Voltage Generators—W. D. Coolidge and E. E. Charlton.
Covers early tubes, ductile tungsten development, the tungsten target, historical development of the hot-cathode tube, some physical principles involved in the hot-cathode tube, high-voltage generators.

Experimental Study of Cathode Rays Outside of the Generating Tube—W. D. Coolidge and C. N. Moore.
Includes history, description of single-section cathode-ray tube, multi-section cathode-ray tubes, cathode-ray tubes for low voltages, high-voltage generating systems for operating cathode-ray tubes, operation of cathode-ray tubes, distribution of cathode rays in front of window, measurement of cathode ray intensity, physical effects produced, chemical effects produced, biological effects, and other applications of the tubes.

Motors and Equipment for Electric Traction in the United States—F. E. Case, S. B. Cooper, M. R. Hanna, N. W. Storer.
A report prepared through the collaboration of engineers of General Electric and Westinghouse. Divided into three sections—a review of light and heavy traffic development, development of d-c. and a-c. motors, development of equipment.

Carrier Current—T. Johnson, Jr.
After a brief picture of the present status of this subject, the paper discusses coupling, flexible lead-in arrangements, single frequency transmission and equipment available and two frequency transmission and equipment available.

Power Transmission and Distribution in the United States—W. W. Lewis, P. H. Chase, D. M. Simmons, H. R. Woodrow.
Discusses the significance, status and trend of development of the more important phases of the subject. Covers improved standards, extended uses of electric service and recognition of need for uninterrupted service.

Electricity Meters, Demand Meters and Instrument Transformers—W. H. Pratt.
Discusses three types of watthour meters, directing attention to features particularly emphasized in American designs. Points to resemblances and contrasts of meters of four American manufacturers. Also covers polyphase meters and meters with many elements, meters for measurements of reactive volt-ampere-hours and of volt-ampere-hours, d. c. meters, demand meters. Instrumen transformers are very briefly reviewed.

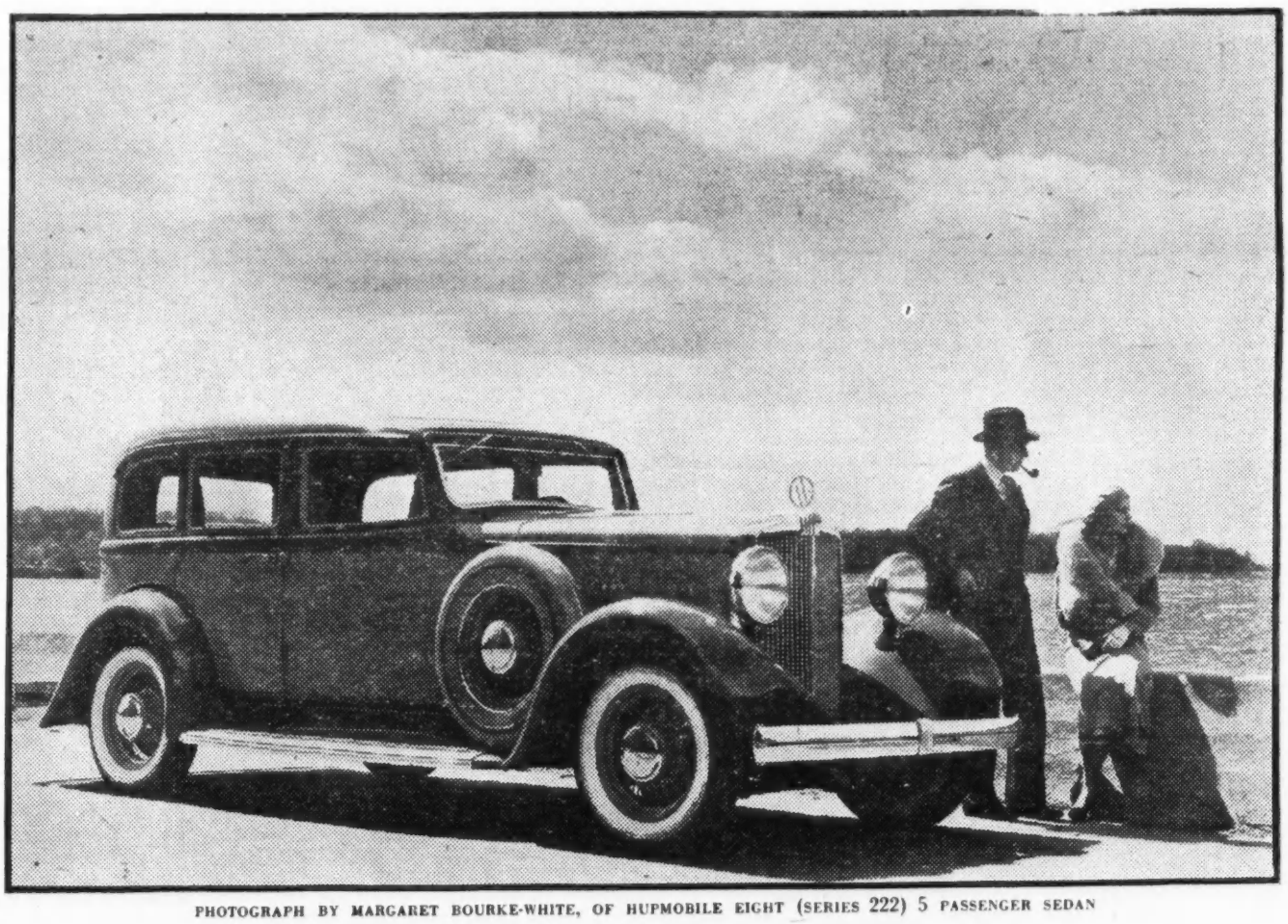
Motive Power Equipments in United States Using Electric Transmission with Internal Combustion Engines—H. L. Andrews.
Discussion and enumeration of Diesel-electric locomotives, gas-electric rail cars, oil-electric rail cars, and their control, in this country, with consideration given to economies in each case. It is pointed out that, while the Diesel engine has been found most suited to locomotive work, with future developments and further weight reductions, it will probably be adapted more generally to motor car work. The use of distillate as low-cost fuel is also mentioned.

Grid-Controlled Mercury Arc Rectifiers—H. D. Brown.
After reviewing the history of this type of equipment, important installations, and factors responsible for its rapid growth in the United States, the author discusses in detail grid control, voltage regulation, arc suppression, inversion and frequency conversion.

Lightning—F. W. Peek, Jr.
A description of work conducted in the high-voltage laboratory at the Pittsfield (Mass.) Works of the General Electric Company.

A SUGGESTION TO DEALERS WHO WANT TO GO PLACES AND DO THINGS:

TIE UP WITH HUPMOBILE!



PHOTOGRAPH BY MARGARET BOURKE-WHITE, OF HUPMOBILE EIGHT (SERIES 222) 5 PASSENGER SEDAN

WHEN sales are slow, buying scattered and prospects few and far between . . . the active dealer must have *live*, salable merchandise. It must be New . . . Striking . . . Out of the Ordinary . . . and Priced to fit today's pocketbook.

Hupmobile *is* such merchandise . . . Revolutionary in design . . . Distinctive . . . Advanced beyond the times. Positively a new car . . . from the ground up.

But Hupmobile is more than distinctive in design, different in appearance, and completely new.

Hupmobile is priced right.

List prices range upward from $795—a new "low" for Hupmobile quality and value. Today's values in Hupmobile cars, therefore, are the greatest in a quarter of a century of fine car manufacture.

There's more in Hupmobile's story to interest dealers . . . much more in hard, two-fisted selling features. Hupmobile has 100 Features for 1932 . . . many of them exclusive, every one a sales point of striking importance.

Today's opportunities with Hupmobile are not limited . . . restricted or hampered. And there are some choice dealer locations available to wide-awake merchants who want to go places and do things.

HUPP MOTOR CAR CORPORATION . . . DETROIT, MICHIGAN

New Dealers Appointed

ARIZONA

Rockne—Tom Isaacson, Holbrook; Mission Camp, Oatman; El Gran Garage, Winslow; Melvin Brown, Springerville.

CALIFORNIA

Graham-Paige—Baxter Brothers, Fowler; J. C. Mabee, Pasadena; Johnston Motor Company, San Luis Obispo; B. O. Lovelace, Visalia; H. O. Harrison, Ltd., San Francisco.

Studebaker—Westerterp Brothers, Petaluma.

Rockne—Thomas Rose, Newman; A. A. McGimsey, Martinez; Leland L. Jones, Barstow; O-K Garage, Walnut Creek; S. W. Knowles, Pittsburg; Harry M. Callendar, Colfax; George Storey, Forest Hill; Penryn Garage, Penryn; W. W. White & Son, Newcastle; S. E. Crockett, Madison; Central Garage, Oakdale; Robinson-Marshall Motors Company, Coalinga; S. W. Knowles, Concord; S. E. Crockett, Winters; Mabel C. Gordon, Lincoln; Paul G. Hoffman Company, Beverly Hills; Paul G. Hoffman Company, Hollywood; Highway Garage, Tracy; H. S. Webb, Lancaster.

CANADA

Graham-Paige—Gilbertson & Nobel, Guelph, Ont.

CONNECTICUT

Rockne—Martin B. Dodd, Winsted; Martin B. Dodd, Norfolk; A. F. LaVigne, Grosvenor Dale; the Le Lagrange Garage and Machine Company, Stonington.

DELAWARE

Rockne — Harold H. Senger, Smyrna.

IDAHO

Graham-Paige — Eline Brothers Motor Company, Lewiston.

Rockne—Davis Motor Company, Nampa; Bancroft Garage, Bancroft; R. C. Vorkoper, Rexburg.

Reo—Frank's Auto Repair Shop, Wallace.

ILLINOIS

Rockne—Crowe Motor Company, Aurora; Braun Motor Sales, Princeton; Auto Service Company, Ottawa.

Reo—Walker Motor Sales, Jacksonville. And the following appointments through Thomas J. Hay, Inc., Chicago distributor: White Sox Motor Sales, Chicago; Luhnow Reo Sales, Chicago; J. M. Hanke, Inc., Chicago; South Suburban Motor Sales, Harvey.

INDIANA

Graham-Paige—Frederick M. Sutter, Inc., Columbus.

Studebaker—Ridenour Auto Sales, Richmond.

Rockne—Harold Crose, West Lafayette; Clark & Rile, Bedford; Gerhard Bergman, Vincennes; George S. Hidey, Culver; J. & H. Auto Company, Frankfort; Irwin Motor Sales, Attica.

Reo—Hubbard Reo Sales, Kokomo.

Rockne—Haas Brothers Motor Company, Fort Madison; H. L. Patterson, Red Oak.

Reo—Reo Garage, Osage; Davenport Motor Mart, Davenport.

KANSAS

Studebaker—Charles Cook, Concordia; L. W. Powers, Osborne.

Rockne—Reusch Motor Company, Lawrence.

KENTUCKY

Rockne—Bartlett Motor Sales, Owensboro; M. O. Lindsey Sales Company, Brownsville; Sandy Valley Motor Company, Paintsville; J. S. Hampton, Glo.

Reo—Haselden Brothers, Lancaster.

MAINE

Rockne—Alan Motor Company, Biddeford; Alphonse H. Monier, Biddeford; C. I. Putnam, Rumford.

MARYLAND

Rockne — Warren W. Boulden, Elkton.

Reo — Brown Motor Company, Sandy Springs.

MASSACHUSETTS

Rockne—Joe's Garage, Waltham; J. W. Johnson Company, Peabody.

Reo—Howard L. White Company, Taunton.

MICHIGAN

Rockne—Petersburg Garage, Petersburg; Havel Motor Sales, Utica; Dennis P. Stockwell, Marine City; Williams Brothers, Dundee.

MISSOURI

Graham-Paige—Earls Motor Company, Steele.

Studebaker — Wallace Machine Shop, Trenton.

Passenger Car Equipment and Accessories

NAME AND MODEL	Speedometer	Clock	Fuel Gauge on Dash	Lock	Spark Plugs	Battery	Heat Indicator	*Cig. Lighter	Smoking Set	Vanity Set	Make of Body Finish Used	Stop Light	Parking or Side Light	Safety Glass	Heater	Front Bumper	Rear Bumper	Wire Wheels	Shock Absorber
Auburn 8-100	Ste	No	K-S	Ele	Cha	USL	Ste	Cas	Dev	—	Mur	Cor	Cor	†	—	Cen	Cen	Day	*Del
Auburn 12-160	Ste	No	K-S	—	Cha	USL	Ste	Cas	Dev	—	Mur	Cor	Cor	†	—	Cen	Cen	Day	*Hou
Austin	NE	No	K-S	BS	Cha	USL	No	No	No	No	Duc	No	No	No	No	Cen	Cen	No	Own
Buick 32-50	AC	—	AC	—	AC	DR	AC	No	—	—	Duc	Gui	Gui	§Lof	—	—	—	K-H	*Del
Buick 32-60	AC	—	AC	—	AC	DR	AC	No	—	—	Duc	Gui	Gui	§Lof	—	—	—	K-H	*Del
Buick 32-80	AC	—	AC	—	AC	DR	AC	—	—	—	Duc	Gui	Gui	§Lof	—	—	—	K-H	*Del
Buick 32-90	AC	—	AC	—	AC	DR	AC	—	—	—	Duc	Gui	Gui	§Lof	*	—	—	K-H	*Del
Cadillac 370 B	AC	Jag	AC	DR	AC	DR	AC	Cas	—	—	—	Gui	Gui	LOF	—	Eat	Eat	K-H	*Del
Cadillac 452 B	AC	Jag	AC	DR	AC	DR	AC	Cas	—	—	—	Gui	Gui	LOF	—	Eat	Eat	K-H	*Del
Cadillac 355 L	AC	Jag	AC	DR	AC	DR	AC	Cas	—	—	—	Gui	Gui	LOF	—	Eat	Eat	K-H	*Del
Chevrolet	AC	—	AC	DR	AC	*	AC	—	Tern	—	Duc	Gui	Gui	†Lof	Own	†Own	Own	Own	Del
Chrysler 6	—	No	Yes	—	—	—	Yes	Cas	No	No	—	—	—	§Dup	*	—	—	—	—
Chrysler 8	—	—	Yes	—	—	Wil	Yes	Cas	No	No	—	—	—	§Dup	*	—	—	—	—
Chrysler Imp. 8	—	Yes	—	—	—	Wil	Yes	Cas	No	No	—	—	—	§Dup	*	—	—	—	—
Chrysler Im. 8 Cus.	—	Yes	—	—	—	Wil	Yes	Cas	No	No	—	—	—	§Dup	*	—	—	—	—
Cord Front Drive	Ste	No	Mot-M	DR	Cha	USL	Ster	Cas	GR	No	Mur	Ind	Ind	—	No	ASP	ASP	Day	Hou
De Soto Six	NE	No	Mot-M	DR	AC	Wil	Yes	†Yes	§Yes	§Yes	Duc	Cor	Hal	§Dup	No	Yes	Yes	—	Del
De Vaux 6-80	Ste	No	Mot-M	Yale	Cha	Nat	Mot-M	No	No	No	Duc	JB	JB	—	No	Gen	Gen	MotoW	Hou
Dodge Six	—	†	AC	DR	AC	Wil	AC	†	VS	—	Ditz	Cor	Cor	§	*	§	§	Budd	Del
Dodge Eight	—	†	AC	DR	AC	Wil	AC	†	VS	No	Ditz	Cor	Cor	§	*	Eat	Eat	Budd	Del
Essex Gr. Su. 6	Ste	No	Mot-M	Ele	AC	Ex	K-S	Cas	Yes	No	*	JB	JB	Dup	No	†	†	MotoW	*Mon
Ford A	Own	No	Yes	Hurd	Cha	Own	No	—	§	—	Own	Own	—	Yes	—	Yes	Yes	—	*Hou
Ford V-8	Own	No	Yes	Hurd	Cha	Own	No	—	§	—	Own	Own	—	Yes	—	Yes	Yes	—	*Hou
Franklin Airman	NE	Borg	Yes	—	Cha	Nat	No	Cas	Yes	Yes	**	—	—	LOF	No	Yes	Yes	No	* —
Franklin V 12	NE	Borg	Yes	—	Cha	Wil	No	Cas	Yes	No	**	Yes	Yes	Yes	No	Yes	Yes	No	*Yes
Graham 6	NE	—	K-S	Her	Cha	Wil	K-S	No	Yes	No	*	Hal	Cor	LOF	No	†ASP	†ASP	MotoW	Del
Graham 8	Ste	—	K-S	Her	Cha	Wil	K-S	No	Yes	No	*	Cor	No	§Lof	No	†ASP	†ASP	MotoW	*Del
Hudson Gr. 8	Ste	—	Mot-M	Ele	AC	Ex	K-S	—	Yes	Yes	*	Hal	Hal	Dup	No	†	†	MotoW	*Gab
Hupmobile 216	Ste	No	Mot-M	Ele	Cha	Wil	Mot-M	No	VS	No	Var	Hal	Hal	§Dup	No	ASP	ASP	Moto-W	*Gab
Hupmobile 222	Ste	No	Ste	Ele	Cha	Wil	Ste	No	VS	No	Var	Hal	Hal	§Dup	No	ASP	ASP	Moto-W	*Gab
Hupmobile 226	Ste	No	Ste	Ele	Cha	Wil	Ste	Cas	VS	No	Var	Hal	Hal	§Dup	No	ASP	ASP	Moto-W	*Gab
La Salle 345 B	AC	Jag	AC	DR	AC	DR	AC	Cas	—	—	—	Hal	Hal	LOF	—	Eat	Eat	K-H	*Del
Lincoln V 8	NE	Wal	K-S	Oak	Cha	Ex	Mot-M	Cas	¶	¶	*	Hal	Own	§	No	Bif	Bif	Own	*Hou
Lincoln 12	NE	Wal	K-S	Oak	Cha	Ex	Mot-M	Cas	¶	¶	—	Hal	Hal	§	No	Gen	Gen	Own	*Hou
Marmon 8-125	NE	†Jag	AC	DR	Cha	Nat	AC	—	GR	—	*	Cor	—	—	—	Eat	Eat	Day	*Gab
Marmon 16	AC	Jag	AC	DR	Cha	Ex	Mot-M	Cas	VS	VS	*	Hal	—	—	—	Eat	Eat	Moto-W	*Hou
Nash Big 6	Ste	No	K-S	Her	AC	USL	K-S	No	*	No	*	Cor	Cor	§Dup	No	Bad	Bad	MotoW	*Del
Nash Stand. 8	Ste	No	K-S	Her	AC	USL	K-S	No	*	No	*	Cor	Cor	§Dup	No	Bad	Bad	MotoW	*Del
Nash Special 8	Ste	No	K-S	Her	AC	USL	K-S	No	*	No	*	Cor	Cor	§Lof	No	Eat	Eat	MotoW	*Del
Nash Adv. 8	Ste	Borg	K-S	DR	AC	Ex	K-S	Cas	*	No	*	Cor	Cor	§Lof	No	Eat	Eat	MotoW	*Del
Nash Ambas. 8	Ste	Borg	K-S	DR	AC	Ex	K-S	Cas	*	No	*	Cor	Cor	§Lof	No	Eat	Eat	MotoW	*Del
Oldsmobile F 32	AC	No	AC	BS	AC	DR	AC	Yes	Tern	No	Duc	Gui	Gui	§Lof	—	Own	Own	K-H	*Lov
Oldsmobile L 32	AC	No	AC	BS	AC	DR	AC	Yes	Tern	No	Duc	Gui	Gui	§Lof	—	Own	Own	K-H	*Lov
Packard Stan. 8	NE	Jag	K-S	Yes	AC	Pre	Mot-M	Cas	Yes	Yes	—	Hal	Yes	LOF	No	Eat	Eat	MotoW	*Del
Packard DeL. 8	NE	Jag	K-S	Yes	AC	Pre	Mot-M	Cas	Yes	Yes	—	Hal	Yes	LOF	No	Eat	Eat	MotoW	*Del
Packard Light 8	NE	No	Yes	Yes	AC	Pre	Mot-M	Cas	Yes	Yes	—	Hal	Yes	Lof	No	Eat	Eat	MotoW	*Del
Packard Twin Six	Wal	Wal	Yes	Yes	AC	Pre	Mot-M	Cas	Yes	Yes	—	Hal	Yes	Lof	No	Eat	Eat	MotoW	*Del
Peerless Mast. 8	AC	Ster	Mot-M	Yale	Cha	Wil	Mot-M	Cas	GR	No	Val	Cor	Cor	Dup	—	Eat	Eat	Day	Gab
Peerless Cust. 8	AC	Ster	Mot-M	Yale	Cha	Wil	Mot-M	Cas	GR	No	Val	Cor	Cor	Dup	—	Eat	Eat	Day	Gab
Pierce-Arrow 54	NE	Borg	K-S	Her	Cha	Wil	K-S	Cas	Wood	Wood	*	Gui	Gui	Dup	No	Eat	Eat	K-H	*Del
Pierce-Arrow 52	NE	Borg	K-S	Her	AC	Wil	K-S	Cas	Wood	Wood	*	Gui	Gui	Dup	No	Eat	Eat	K-H	*Del
Pierce-Arrow 53	NE	Borg	K-S	Her	AC	Wil	K-S	Cas	VS	VS	*	Gui	Gui	Dup	No	Eat	Eat	K-H	*Del
Plymouth	NE	†	Yes	DR	AC	Wil	Yes	No	Yes	No	Duc	Cor	Co	§Dup	No	Eat	Eat	‡	Del
Pontiac 6	AC	No	AC	DR	AC	DR	AC	No	Tern	Tern	Duc	Gui	Gui	§Lof	—	Gen	Gen	K-H	*Lov
Pontiac V-8	AC	No	AC	DR	AC	DR	AC	No	Tern	Tern	Duc	Gui	Gui	§Lof	—	Gen	Gen	K-H	*Lov
Reo "S"	Ste	No	K-S	DR	Cha	Wil	AC	No	Yes	No	†	—	Gui	No	No	CG	CG	MotoW	Del
Reo Royale Cust.	Ste	Elgin	K-S	DR	Cha	Wil	AC	Cas	Yes	No	†	Gui	Gui	†	No	CG	CG	MotoW	Del
Reo Royale	Ste	No	K-S	DR	Cha	Wil	AC	Yes	Yes	No	†	Gui	Gui	—	No	CG	CG	MotoW	Del
Reo 825	Ste	—	K-S	DR	Cha	Wil	AC	Yes	Yes	No	†	—	Gui	†	No	CG	CG	MotoW	Del
Rockne 6-65	Ste	No	K-S	Aut-L	Cha	Wil	K-S	—	Yes	No	*	Cor	Cor	§Lof	No	Eat	Eat	K-H	Del
Rockne 6-75	AC	No	K-S	Aut-L	Cha	Wil	K-S	—	Yes	No	*	Cor	Cor	§Lof	No	Eat	Eat	K-H	Hou
Studebaker 6-55	Ste	No	AC	DR	Cha	Wil	Ste	No	Yes	—	*	Cor	Gui	$	No	Eat	Eat	K-H	Hou
Studebkr Dict. 62	Ste	No	AC	DR	Cha	Wil	Ste	No	Yes	—	*	Cor	Gui	$	No	—	—	K-H	Hou
Studeb'r Com. 71	Ste	No	AC	DR	Cha	Wil	Ste	No	Yes	—	*	Gui	Gui	$	No	Eat	Eat	K-H	*Hou
Studeb'r Pres. 91	Ste	Borg	AC	DR	Cha	Wil	Ste	Cas	Yes	—	*	Gui	Gui	$	No	Eat	Eat	K-H	*Hou
Stutz LAA	Ste	Wal	Mot-M	DR	Cha	Nat	Mot-M	Cas	No	Lin	*	Cor	Cor	Dup	—	Buck	Buck	K-H	Gab
Stutz MA	Ste	Wal	Mot-M	Her	Cha	Nat	Mot-M	Cas	Lin	Lin	*	Cor	Cor	Dup	—	Stan	Stan	K-H	Gab
Stutz MB	Ste	Wal	Mot-M	Her	Cha	Nat	Mot-M	Cas	Lin	Lin	*	Cor	Cor	Dup	—	Stan	Stan	K-H	Gab
Stutz DV 32	Ste	Wal	Mot-M	Her	Cha	Nat	Mot-M	Cas	Lin	Lin	*	Cor	Cor	Dup	—	Stan	Stan	K-H	Gab
Willys-Over. 6-90	NE	No	Yes	Aut-L	Cha	USL	No	No	No	No	—	Yes	Yes	§Lof	No	†	†	K-H	Mon
Willys-Over 8-88	NE	No	Yes	Aut-L	Cha	USL	Yes	No	Yes	No	—	Yes	Yes	§Lof	No	†	†	K-H	Mon
Willys-Knt. 66 D	NE	Wal	Yes	Aut-L	Cha	USL	Yes	Yes	Yes	No	—	Yes	Yes	Lof	No	†	†	K-H	Mon
Willys-Knt. 95	NE	No	Yes	Aut-L	Cha	USL	Yes	No	Yes	No	—	Yes	Yes	§Lof	No	†	†	K-H	Mon

KEY TO ABBREVIATIONS USED IN THIS TABLE

SPEEDOMETER

AC—AC Spark Plug Co., Flint, Mich.
NE—North East Appliance Corp.
Ste—Stewart-Warner Speedometer Corp.
Wal—Waltham Watch Co.
Var—Various makes.

CLOCK

Borg—The Geo. W. Borg Corporation.
Elgin—Elgin Watch Co.
Jag—Jaeger Watch Co., New York city.
Ster—Sterling Clock Co., La Salle, Ill.
Thom—Seth Thomas Clock Co.
Wal—Waltham Watch Co., Waltham, Mass.
*Optional.
†Extra equipment.

FUEL GAUGE

AC—AC Spark Plug Co., Flint, Mich.
K-S—King Seeley Corp., Ann Arbor, Mich.
Mot-M—Moto Meter Gauge and Equipment Corp., Long Island City, N. Y., and La Crosse, Wis.

LOCK

Aut-L—Electric Auto-Lite Co., Toledo.
BS—Briggs-Stratton Co., Milwaukee.
Ele—Mitchell Specialty Co., Holmesburg, Pa.
DR—Delco-Remy Corp., Anderson, Ind.
Her—Hershey Mfg. Co., Chicago.
Hurd—Hurd Lock Co., Almont, Mich.
Oak—Oakes Products Corp., Chicago, Ill.
Sha—Shaler Lock Co., Milwaukee, Wis.
Yale—Yale & Towne Mfg. Co.

SPARK PLUG

AC—AC Spark Plug Co., Flint, Mich.
Cha—Champion Spark Plug Co., Toledo, O.

BATTERY

DR—Delco-Remy Corp.
Ex—Electric Storage Battery Co.
Nat—National Lead Battery Co., St. Paul.
Pre—Pres-O-Lite Co., Indianapolis, Ind.
USL—USL Battery Corp.
Wil—Willard Storage Battery Co.
*Using USL and Delco Remy.

HEAT INDICATOR

AC—AC Spark Plug Co., Flint, Mich.
K-S—King Seeley Corp., Ann Arbor, Mich.
Mot-M—Moto Meter Gauge and Equipment Corp., Long Island City, N. Y., and La Crosse, Wis.
Ste—Stewart-Warner Speedometer Corp.
Ster—Sterling Clock Co., La Salle, Ill.

CIGAR LIGHTER

*Cigar lighters in many cases are optional equipment, and are not standard on all models; the names of lighters shown indicate the makes supplied to various car makers.
Cas—Casco Products Corp., Bridgeport, Conn.
NE—North East Appliance Corp., Rochester, N. Y.
†Extra equipment.

SMOKING AND VANITY SETS

Dev—Deviro.
GR—Grand Rapids Metalcraft Corp.
Lin—Linden.
VS—Van Sicklen Corp., Elgin, Ill.
Tern—Ternstedt Mfg. Co., Detroit, Mich.
Cuno—Cuno Engineering Corp., Meriden, Conn.
Wood—Woodcraft.
*Various makes.
§De Luxe models only
¶Using both Woodcraft and Van Sicklen.

BODY FINISHES

Ditz—Ditzler Color Co., Detroit, Mich.
Duc—E. I. du Pont de Nemours & Co., Philadelphia.
MIM—Pittsburgh Plate Glass Co.
Mur—Murphy Varnish Co., Newark, N. J.
Rin—Rinched Mason Co.
Val—Valentine & Co., New York city.
*Various lacquers used.
†Using both Ditzler and Pratt & Lambert.
**Using both Duco and Valentine.

STOP AND PARKING LIGHTS

Cor—The Corcoran-Brown Lamp Co., Cincinnati, O.
Gui—Guide Lamp Corp., Anderson, Ind.
Hal—C. M. Hall Lamp Co., Detroit, Mich.
Ind—Indiana Lamp Corp., Connersville, Ind.
JB—The Jno. W. Brown Lamp Mfg. Co., Columbus, O.
*Using both Hall or Guide.
**Using both Corcoran and Brown.

SAFETY GLASS

LOF—Libbey-Owens-Ford.
Dup—Duplate Corp.
§Optional.
†Extra equipment.
‡Using both Libby-Owen-Ford and Duplate.

HEATER

Kel—Kelch made by Grand Rapids Metalcraft Corp., Grand Rapids, Mich.
*Special equipment at additional cost.

BUMPERS

ASP—Alloy Steel Products.
Bad—Badger Mfg. Corp., Milwaukee.
Bif—Biflex Corp., Waukegan, Ill.
Buck—See Cen.
CG—C. G. Spring and Bumper Company
Cen—Central Brass & Fixture Co., Springfield, O. Also makers of Buckeye bumpers.
Eat—Eaton Axle and Spring Co., Cleveland, O.
Gen—General Spring and Bumper, Detroit.
Stan—Standard Steel Spring Corp.
†Extra equipment.
*Optional.
§Standard equipment at additional cost.

WIRE WHEELS

Budd—Budd Wheel Co., Detroit.
MotoW—Motor Wheel Corp., Lansing, Mich.
Day—Dayton Wire Wheel Co., Dayton, O.
K-H—Kelsey-Hayes, Detroit, Mich.
‡Using both Kelsey-Hayes and Motor Wheel Corp.
†Not standard equipment.

SHOCK ABSORBERS

Del—Delco Products Corp., Dayton, O.
Gab—The Gabriel Company, Cleveland.
Hou—Houde Engineering Corp., Buffalo.
Mon—Monroe Auto Equip. Mfg. Co., Monroe, Mich.
*Equipped with ride control

STATE TRAFFIC BOARD ABOLISHED IN JERSEY

Trenton, N. J., June 6.—The abolition of the state Traffic Commission, the first of thirty-five commission eliminations recommended by Gov. Moore to receive full legislative sanction, has been approved by the Senate.

The Senate passed the measure, abolishing the commission and relegating its powers to the commissioner of motor vehicles without a dissenting vote. The bill provides for the transferring to the motor vehicle commissioner of an unexpended balance of $13,000. Senator E. Donald Sterner of Monmouth urged that an additional appropriation of $30,000 be included in the annual appropriation bill to enable the statistical work of the eliminated commission to be continued by the Motor Vehicle Department.

Production--Engineering--Factory

NEW ASPECTS OF FREE-WHEELING LUBRICANT PROBLEM

This is the third installment of a paper by H. R. Wolf and H. C. Mougey of the General Motors engineering staff presented at the second mid-year meeting, division of refining, American Petroleum Institute, Tulsa, Okla.

S. A. E. free-wheeling lubricants shall be properly refined, free from water, sediment or any other substance detrimental to the proper performance of the lubricant. Fillers or abrasives such as talc, pulp, cork, fuller's earth, graphite, mica, asbestos, etc., are not permissible. Saponifiable oils or compounds derived therefrom are not excluded unless their use causes the lubricant to fail to meet other requirements. Lubricants which have an artificial viscosity are not permissible.

The Saybolt viscosity at 210 deg. F. shall not be less than the values given in Table 4, for the corresponding gravities, and the Saybolt viscosity at 100 or 130 deg. F. shall not be greater than the values given in Table 5, for the corresponding viscosities at 210 deg. F., for lubricants that do not contain saponifiable oil additions or compounds derived therefrom. In the case of lubricants containing saponifiable oils or compounds derived therefrom, Table 6 shall be used in determining the viscosity limits at 100 deg. F. or 130 deg. F. for the corresponding viscosities at 210 deg. F. Lubricants whose viscosities are outside the ranges of viscosities at 210 deg. F., as shown in Tables 5 and 6, are not permitted under these viscosity numbers. Values between the minimums and maximums, for each viscosity number, not shown in Tables 4, 5, and 6, shall be determined by interpolation.

Free-wheeling lubricants of the extreme-pressure type shall meet the viscosity requirements of Table 4 and of Table 5 or 6, depending upon whether or not they contain additions of saponifiable oil or compounds derived therefrom. They shall be designated by the letters "E. P."

TABLE 4

S.A.E. 80 F.W.						
A.P.I gravity at 60 deg. F.	31.14	28.39	25.72	23.14	20.65	18.24
Specific gravity at 60 deg. F.	0.870	0.885	0.900	0.915	0.930	0.945
Min. Saybolt viscosity at 210 deg. F.	42	42	42	41	41	41
S.A.E. 90 F.W.						
A.P.I. gravity at 60 deg. F.	29.30	27.49	25.72	23.99	22.30	20.65
Specific gravity at 60 deg. F.	0.880	0.890	0.900	0.910	0.920	0.930
Min. Saybolt viscosity at 210 deg. F.	72	71	71	70	70	69
S.A.E. 110 F.W.						
A.P.I. gravity at 60 deg. F.	28.39	26.60	24.85	23.14	21.47	19.84
Specific gravity at 60 deg. F.	0.885	0.895	0.905	0.915	0.925	0.935
Min. Saybolt viscosity at 210 deg. F.	142	140	138	137	135	134

These lubricants shall not channel in service at the following temperatures:

Viscosity Number	Maximum Channeling Temperature
S.A.E. 80 F.W.	—10 deg. F.
S.A.E. 90 F.W.	0 deg. F.
S.A.E. 110 F.W.	+10 deg. F.

Notes and uses: The Saybolt viscosity is influenced by the specific gravity of the lubricant under test, and a correction factor must be applied in order to reduce the Saybolt viscosities to the same absolute values. The Saybolt viscosities given in Table 4 are based upon absolute viscosities of 3.96, 11.24, and 25.20 centipoises at 210 deg. F., respectively, for the different viscosity numbers.

The viscosity of the lubricant at the slipping temperature is a function of viscosity and of viscosity index. The maximum Saybolt viscosities at 100 or 130 deg. F., corresponding to the actual Saybolt viscosities at 210 deg. F. given in Tables 5 and 6, are arranged to permit lubricants of all viscosity indices which fall within the operating temperature ranges covered by these viscosity numbers.

S.A.E. free-wheeling transmission lubricants are intended and recommended for use under the following minimum atmospheric temperature conditions:

Viscosity Number		Temperature
S.A.E. 80 F.W.	above	—15 deg. F.
S.A.E. 90 F.W.	above	+15 deg. F.
S.A.E. 100 F.W.	above	+40 deg. F.

TABLE 5

Lubricants Free from Saponifiable Oils or Compounds Derived Therefrom

S.A.E. 80 F.W.		S.A.E. 90 F.W.		S.A.E. 110 F.W.	
Actual Saybolt Viscosity at 210 Deg. F.	Maximum Saybolt Viscosity Permitted at 100 Deg. F.	Actual Saybolt Viscosity at 210 Deg. F.	Maximum Saybolt Viscosity Permitted at 130 Deg. F.	Actual Saybolt Viscosity at 210 Deg. F.	Maximum Saybolt Viscosity Permitted at 130 Deg. F.
41	167	69	320	134	1,113
42	177	70	325	135	1,116
43	188	71	330	136	1,119
44	198	72	335	137	1,122
45	209	73	340	138	1,125
46	219	74	345	139	1,128
47	230	75	350	140	1,131
48	240	76	355	150	1,159
49	250	78	365	160	1,187
50	260	80	375	170	1,215
51	270	85	400	180	1,243
52	280	90	425	190	1,272
53	290	95	450	200	1,300
54	300	100	475		
55	310	105	490		

TABLE 6

Lubricants Containing Saponifiable Oils or Compounds Derived Therefrom

S.A.E. 80 F.W.		S.A.E. 90 F.W.		S.A.E. 110 F.W.	
Actual Saybolt Viscosity at 210 Deg. F.	Maximum Saybolt Viscosity Permitted at 100 Deg. F.	Actual Saybolt Viscosity at 210 Deg. F.	Maximum Saybolt Viscosity Permitted at 130 Deg. F.	Actual Saybolt Viscosity at 210 Deg. F.	Maximum Saybolt Viscosity Permitted at 130 Deg. F.
41	150	69	280	134	906
42	160	70	285	135	910
43	170	71	290	136	914
44	180	72	295	137	918
45	190	73	300	138	922
46	200	74	305	139	926
47	210	75	310	140	930
48	220	76	315	150	970
49	230	78	325	160	1,010
50	240	80	335	170	1,050
51	249	85	360	180	1,090
52	258	90	385	190	1,130
53	267	95	415	200	1,170
54	276	100	435		
55	285	105	460		

TIRE AND RIM YEAR BOOK

The Tire and Rim Association is issuing from its Cleveland, O., headquarters its Year Book for 1932. This volume includes sections devoted to passenger car equipment, pneumatic truck and bus equipment, motorcycle equipment, airplane equipment, solid tire equipment, a miscellaneous section and a European supplement.

For the tire man of any degree this year book is replete with valuable information. It is illustrated with diagrams, graphs and has innumerable tables. In its field it is an invaluable publication and is excellently gotten out. The tire and Rim Association is to be congratulated on the job it has done in this volume.

CLASSIFIED ADVERTISEMENTS IN THE AUTOMOTIVE DAILY NEWS BRING RESULTS

LARGE GEAR GENERATOR

The Buffalo plant of the Farrel-Birmingham Company has produced a huge Sykes gear generator weighing 120 tons and capable of handling gears up to fifty tons in size. The machine can cut gears up to twenty-two feet in diameter, sixty inches face width and six inches circular pitch or one-half diametral pitch. The smallest tooth size that it will handle is six inches diametral pitch.

The machine is designed for cutting herringbone gears, but may be used for producing turbine reduction gears used in marine propulsion. Pinions of relatively small size may also be cut. Pinions of eight inches pitch can be cut with cutters twelve inches in diameter, and pinions having a pitch diameter of three inches may be produced with eighteen-inch cutters. Pinions can be cut integral with shafts of any length on either side of the teeth and of any size up to thirty inches, the main spindle of the machine being bored to 30¼ inches.

The work-carrying mechanism of this gear cutter is rigidly secured to the bed. The cutter driving and controlling mechanism is mounted on the saddle, sliding on the ways on the main beds.

An indexing worm wheel twelve feet in diameter is fitted and is used only during cutting operations, when it rotates slowly. An auxiliary spur gear ring is bolted to the indexing wheel, which can be driven by a separate motor. The main driving motor is located on the saddle, carrying the cutter driving and control mechanism. This obviates the use of long-splined shafts and gives smoother drive to the cutters. Cutter saddle reciprocation may be from one to sixty strokes a minute. The generating feed mechanism is actuated from the main drive through a safety clutch that slips and stops the machine if the generating feed mechanism requires too much power. Four different speeds may be had for the feed mechanism.

The machine can use either helical or straight tooth cutters, and herringbone, single helical or straight tooth spur gears can be cut. The two cutting tools operate alternately so the cutting is continuous. On the return stroke each cutter is withdraw from the work by means of a relief mechanism, which is of a design to give silent operation. Cutter housings are locked during the cuttnig stroke, allowing heavier cuts to be taken. The helical guides attached to the cutter spindles are interchangeable.

The stroke of this machine is from 0 to 32 inches. The position of the cutter heads is adjustable over a wide range. After adjustment the heads are locked to the reciprocating carriage by means of the differential mechanism. The main driving motor is a forty horsepower unit and the motor that operates the main spindle is a ten horsepower unit. The auxiliary motor that operates the power traverse of the main spindle is rated at five horsepower. A three horsepower motor drives the cutting coolant pump.

FINE CARS SINCE 1902

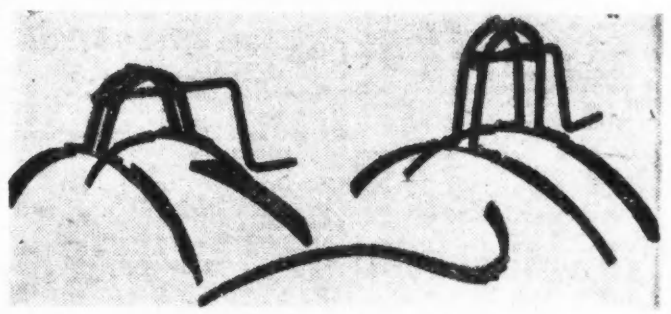
IN winning the Stevens Trophy on the Indianapolis Motor Speedway, a standard Marmon Sixteen sedan, fully equipped, traveled the equivalent of nearly four complete 500-mile races*—and in twenty-four continuous hours.

*Marmon Sixteen record: 1,934 miles in 24 hours; new Indianapolis race record established this year by Fred Frame: 500 miles in 4 hours, 48 minutes, 3 seconds.

MARMON

SALES DEPARTMENT INDIANAPOLIS, IND.

WEAVER DROP CENTER RIM TOOL



New drop center rims offer new problems in changing tires which are quickly solved, it is claimed, by the new Weaver drop center rim tool.

It is extremely simple and quick to operate, always ready for use, and so light in weight it can easily be carried to the car.

After the valve is loosened the two jaws of the tool are placed over the tire adjacent to the valve stem. A few turns of the crank quickly compresses the side walls to about one-third the circumference of the tire, allowing beads to drop into the valley of the rim, which frees the opposite section of the tire for easy removal with the tire iron. Tires are easily mounted by reversing this operation.

The Weaver drop center rim tool is made in two sizes—small size to handle tires to and including six inch and large size to handle from five to eight inch tires, inclusive. Due to variation in rim and tire sizes, both size rim tools are needed in order to handle all size passenger car tires to best advantage.

The special tire iron shown is supplied with both size rim tools.

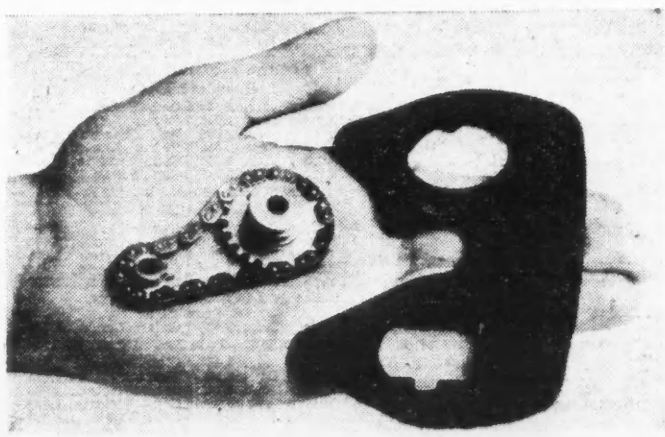
TIREFLATOR FOR LOW PRESSURE TIRES

The Service Station Equipment Company of Conshohocken, Pa., has announced a line of Tireflators equipped with an automatic mechanism designed for use with the new low pressure balloon tires. The new low pressure Tireflator supplies automatic and accurate inflation from five to sixty-five pounds, it is claimed. A high pressure release for inflations over sixty-five pounds is provided in this unit.

New low prices were recently announced.

In addition to the standard line of Tireflators the Service Station Equipment Company has placed a new small unit on the market. This unit is known as the Tire-Meter and is constructed on the same principles as the Tireflator. It is primarily designed for use on auxiliary air lines where the larger Tireflator installations cannot be used. The dial on this unit is calibrated for pressures from five to forty-five pounds. This unit can also be used in connection with any type air tower and may be combined with standard makes of hose reels. A wall installation of the Tire-Meter requires only a limited space. Record sales have been made on this unit during the past few weeks.

Comparing Morse Chains



ABOVE is a ⅜-inch-pitch Morse chain, in comparison with a 3-inch-pitch link designed twenty-three years ago

LEAKY CONDENSER TESTER

The B-L Electric Manufacturing Company is placing on the market a new tester for leaky condensers known as the B-L flash-ometer. This device is designed to detect faults in condensers, coils, resistors, switches, wiring and lamps. It is portable and compace and has no meters or batteries.

In operation the flash-ometer is connected with an AC cord to a 110 volt 60 cycle outlet. The test prods are touched to the part to be tested. A momentary flash when the leads are applied, but no flash thereafter, indicates a good condenser. A regular intermittant flashing when the test leads are held across the condenser terminals indicates a high resistance leak. A continuous dim glow shows a partially shortened condenser and a bright glow indicates a dead short.

FORMS OWN CONCERN

West New York, N. J., June 6.—Frank Loos, who has been connected with the service department of the Upperc u Cadillac Company for ten years, severed his connection with the Cadillac Company and has established his own repair and service station in the two-story brick garage building at 599-601 16th St., West New York.

MARYLAND PROMOTES COURTESY WEEK JULY 3

Baltimore, June 6.—Motorists of Maryland will be urged by the state commissioner of motor vehicles, E. Austin Baughman, to observe "courtesy week" throughout the entire state from July 3 to 9, inclusive. The purpose of the week, according to Col. Baughman, is to obtain strict adherence to the motor vehicle laws of the state.

"It is my intention," said Col. Baughman, "to solicit the assistance of various safety organizations throughout the state in helping make courtesy week a successful one. Fleet owners of passenger cars and trucks will be urged to have meetings with their employees and to post prominently signs and other communications on courtesy week where they will serve as reminders during this drive.

"It would indeed be quite an accomplishment and a record of which to be proud if the more than 300,000 motor car and truck owners would take this move seriously enough to go through the entire time without a mishap."

The "week" will be an annual feature if it meets with favorable response of the part of the motorists of the state, he stated. The first week of July was selected because of extremely heavy motor traffic over the July 4 holiday.

DURANT CLAIMS $7,000,000 LOSS IN JERSEY SUIT

Freehold, N. J., June 6.—Specific losses totaling $7,000,000, said to have been suffered by William C. Durant, automobile manufacturer, when Benjamin Block & Co., New York brokers, sold out his holdings in 1930, will be contained in calculations filed by both parties in the close of the trial of Durant's suit on June 17.

LEASES KEARNY PLANT

Kearny, N. J., June 6.—Louis Schlesinger, Inc., has leased to the American Auto Parts Company a building on Lincoln Highway, Kearny, for the Martin Parry Corporation. The American Auto Parts Company deals in used cars and automobile parts. The building is a large industrial type building containing 20,000 square feet and is served by a Pennsylvania Railroad siding.

OKLAHOMA WANTS GAS TAX CUT TO 2C. A GAL.

Oklahoma City, June 6.—An effort has been started in Oklahoma to get the voters to reduce by 50 per cent. the state gasoline tax and by a greater amount the annual fee for automobile license tags. Notice has been filed with the secretary of state of intention to initiate a bill to reduce the state gasoline tax to 2 cents a gallon and the automobile license fee to $5 for all motor vehicles with listed price of more than $1,000 and to $3 for those with listed price of less than $1,000.

CURRENT PRICES OF PASSENGER CAR MODELS

AUBURN—8-cyl. 127 W. B.
8-100 Standard Models

Business Coupe	945	5 Phaeton Sedan	1,195
5 2-dr. Brougham	995	Speedster	1,195
4 Full Sedan	1,045	7 Sedan (136	
Cus. Type Cabri.	1,095	W. B.)	1,245

AUBURN—8-cyl. 127 W. B.
Custom 8-100 Dual Ratio Models

Business Coupe	1,145	5 Phaeton Sedan	1,395
5 2-dr. Brough.	1,195	Speedster	1,395
4 Full Sedan	1,245	7 Sedan (136	
Cus. Type Cabri.	1,295	W. B.)	1,445

AUBURN—12-cyl. 133 W. B.
12-160 Standard Models

Business Coupe	1,445	Cus. Type Cabri.	1,595
5 2-dr. Brough.	1,495	5 Phaeton Sedan	1,695
4 Full Sedan	1,545	Spedester	1,695

AUBURN—12-cyl. 133 W. B.
Custom 12-160 Dual Ratio Models

Business Coupe	1,645	Cus. Type Cabri.	1,795
5 2-dr. Brough.	1,695	5 Phaeton Sedan	1,895
4 Full Sedan	1,745	Speedster	1,895

AUSTIN—4-cyl. 75 W. B.

Business Coupe	330	Runabout	395
4 Sedan	395	Standard Coupe	395

BUICK—8 cyl. 114 W. B.
Models 32-50

2 Business Coupe	935	4 Con. Cp. Rdst.	1,080
5 Sedan	995	5 Spec. Sedan	1,080
4 Spec. Coupe	1,040	5 Con. Phaeton	1,090
5 Vic. Coupe	1,060	3 Spt. Phaeton	1,155

BUICK—8-cyl. 118 W. B.
Models 32-60

2 Bus. Coupe	1,250	5 Sedan	1,310
4 Spec. Coupe	1,290	5 Con. Phaeton	1,310
4 Con. Cp. Rdst.	1,310	5 Spt. Phaeton	1,390

BUICK—8-cyl. 126 W. B.
Models 32-80

5 Vic. Trav. Cp.	1,540	5 Sedan	1,570

BUICK—8-cyl. 134 W. B.
Models 32-90

7 Spt. Phaeton	1,675	5 Club Sedan	1,820
4 C'try Club Cp.	1,740	5 Con. Phaeton	1,830
5 Vic. Coupe	1,785	7 Sedan	1,955
4 Con. Cp. Rdst.	1,805	7 Limousine	2,055
5 Sedan	1,805		

CADILLAC—V-8, Series 355 B. 134 W. B.
Fisher Bodies

2 Coupe	2,795	2 Roadster	2,895
5 Stan. Sedan	2,895	2 Con. Coupe	2,945

CADILLAC—V-8, Series 355 B. 140 W. B.
Fisher Bodies

5 Coupe	2,995	7 Sedan	3,145
5 Stan. Phaeton	2,995	5 Spt. Phaeton	3,245
5 Spec. Sedan	3,045	7 Imperial	3,295
5 Town Sedan	3,095	5 A. W. Phaeton	3,495
5 Spec. Phaeton	3,095		

CADILLAC—V-8, Series 355 B. 140 W. B.
Fleetwood Bodies

5 Sedan	3,395	5 Town Cabriol.	4,095
5 Town Coupe	3,395	7 Town Cabriol.	4,245
7 Sedan	3,545	7 Lim. Brough.	4,245
7 Limousine	3,745		

CADILLAC—V-12. Series 370 B. 134 W. B.
Fisher Bodies

2 Coupe	3,495	2 Roadster	3,595
5 Stan. Sedan	3,595	2 Con. Coupe	3,645

CADILLAC—V-12. Series 370 B. 140 W. B.
Fisher Bodies

5 Coupe	3,695	7 Sedan	3,845
5 Stan. Phaeton	3,695	5 Spt. Phaeton	3,945
5 Spec. Sedan	3,745	7 Imperial	3,995
5 Town Sedan	3,795	5 A. W. Phaeton	4,195
5 Spec. Phaeton	3,795		

CADILLAC—V-12. Series 370 B. 140 W. B.
Fleetwood Bodies

5 Sedan	4,095	5 Town Cabriol.	4,795
5 Town Coupe	4,095	7 Town Cabriol.	4,945
7 Sedan	4,245	7 Lim. Brough.	4,945
7 Limousine	4,445		

CADILLAC—V-16. Series 452 B. 143 W. B.
Fisher Bodies

2 Coupe	4,495	2 Roadster	4,595
5 Stan. Sedan	4,595	2 Con. Coupe	4,645

CADILLAC—V-16. Series 452 B. 149 W. B.
Fisher Bodies

5 Stan. Phaeton	4,695	5 Spt. Phaeton	4,945
5 Spec. Phaeton	4,795	5 A. W. Phaeton	5,195

CADILLAC—V-16. Series 452 B. 149 W. B.
Fleetwood Bodies

5 Sedan	5,095	5 Town Cabriol.	5,795
5 Town Coupe	5,095	7 Town Cabriol.	5,945
7 Sedan	5,245	7 Lim. Brough.	5,945
7 Limousine	5,445		

CHEVROLET—6-cyl. 109 W. B.

Roadster	445	De Luxe Coach	515
Sport Roadster	485	Sport Coupe	535
Standard Coupe	490	5 Coupe	575
Coupe (5 win.)	490	Sedan	590
Phaeton	495	Cabriolet	595
Coach	495	Special Sedan	615
De Luxe Coupe	510	Landau Phaeton	625

CHRYSLER—6-cyl. 116 W. B.

2 Business Coupe (5 wire or wood wheels)	865	5 Sedan (5 wire or wood wheels)	895
2-4 Roadster (R.S.) (5 wire or wood wheels)	885	5 Phaeton (5 wire wheels)	915
2-4 Coupe R.S.) (5 wire or wood wheels)	885	2-4 Con. Coupe (R.S.) (5 wire or wood wheels)	935
		5 Con. Sedan (6 wire or wood wheels)	1,125

CHRYSLER—8-cyl. 125 W. B.

2-4 Coupe (R.S.) (5 wire or wood wheels)	1,435	2-4 Con. Coupe (R.S.) (5 wire or wood wheels)	1,495
5 Coupe (5 wire or wood wheels)	1,475	5 Con. Sedan (6 wire or wood wheels)	1,695
5 Sedan (5 wire or wood wheels)	1,475		

CHRYSLER IMPERIAL—8-cyl. 135 W. B.

2-4 Coupe (R.S.) (5 wire or wood wheels)	1,925	5 Con. Sedan (6 wire or wood wheels)	2,195
5 Sedan (5 wire or wood wheels)	1,945		

CHRYSLER IMPERIAL—8-cyl. 146 W. B.
Custom Models

5 Cl. Cpld. Sedan (6 wire or wood wheels)	2,895	7 Sedan Limousine (6 wire or wood wheels)	3,295
7 Sedan (6 wire or wood wheels)	2,995	5 Phaeton (6 wire or wood wheels)	3,395
2-4 Con. Coupe Roadster (6 wire or wood wheels)	3,295	5 Con. Sedan (6 wire or wood wheels)	3,595

CORD—8-cyl. 137½ W. B.

Sedan	2,395	Cabriolet	2,495
Brougham	2,395	Phaeton Sedan	2,595

DE SOTO—6-cyl. 113 W. B.
Standard Models

2 Bus. Roadster	675	4 Coupe (R. S.)	735
2 Bus. Coupe	695	5 Sedan	775
5 Brougham	695	5 Phaeton	775

DE SOTO—6-cyl. 113 W. B.
Custom Models

4 Roadster	775	2-4 Con. Coupe	845
Custom Coupe	790	5 Con Sedan	975
5 Sedan	833		

DE VAUX—6-cyl. 114 W. B.

2 Coupe	725	Custom Coupe (R. S.)	845
Standard Coupe (R. S.)	775	Custom Sedan	845
Standard Sedan	775	Con. Cus. Coupe	895

DODGE—6-cyl. 114½ W. B.
D. L. Models

2 Business Coupe (5 wire or wood wheels, R. M.)	795	5 Sedan (5 wire wheels, 1 F. W.)	859.50
2 Business Coupe (5 wire or wood wheels, 1 F. W.)	809.50	2-4 Coupe (R.S.) 6 wire or wood wheels, 2 F.W.)	865
2 Business Coupe (6 wire wheels, 2 F. W.)	825	5 Sedan (6 Dem. wood wheels, 2 F. W.)	875
2-4 Coupe (R.S.) 5 wire or wood wheels, R. M.)	835	5 Sedan (6 wire wheels, 2 F.W.)	875
5 Sedan (5 Dem. wood wheels, R. M.)	845	5 Sedan 5 disc wheels, R. M.)	885
5 Sedan (5 wire wheels, R.M.)	845	2-4 Con. Coupe (5 wire or wood wheels, R. M.)	895
		2-4 Con. Coupe (6 wire or wood wheels, 2 F.W.)	925

DODGE—8-cyl. 122 W. B.
D. K. Models

2-4 Coupe R.S.) (5 wood or wire wheels, R.M.)	1,115	5 Sedan 6 Dem. wood wheels, 2 F. W.)	1,180
5 Sedan (5 Dem. wood wheels, R. M.)	1,145	5 Sedan (6 wire wheels, 2 F.W.)	1,180
5 Sedan (5wire wheels, R.M.)	1,145	5 Coupe (6 wire or wood wheels, 2 F. W.)	1,180
5 Coupe (5 wire wheels, R.M.)	1,145	2-4 Con. Coupe (6 wire or wood wheels, 2 F. W.)	1,220
2-4 Coupe (R.S.) (6 wire or wood wheels, 2 F. W.)	1,150	5 Con. Sedan	1,395

ESSEX—6-cyl. 113 W. B.
Standard Series

2 Business Coupe	660	5 2-dr. Sedan (3 windows)	735
5 Coach	665		
4 Coupe	705		

ESSEX—6-cyl. 113 W. B.

Business Coupe	695	Standard Sedan	775
Coach	705	Special Coupe	795
Town Sedan	745	Special Sedan	845
4 Coupe	745	Con. Coupe	845

FORD—V-8. 106 W. B.

Roadster	460	De Luxe Coupe	525
Coupe	490	Fordor Sedan	590
Phaeton	495	Victoria	600
Tudor Sedan	500	Cabriolet	610
De L. Roadster	500	De Luxe Fordor Sedan	645
Sport Coupe	525	Con. Sedan	650
De L. Phaeton	545		
De Luxe Tudor Sedan	550		

FORD—4-cyl. 106 W. B.

Roadster	410	Le Luxe Coupe	525
Coupe	440	Fordor Sedan	540
Phaeton	445	Victoria	550
Tudor Sedan	450	Cabriolet	560
De L. Roadster	450	De Luxe Fordor Sedan	595
Sport Coupe	485	Con. Sedan	600
De L. Phaeton	495		
De Luxe Tudor Sedan	500		

FRANKLIN—6-cyl. 132 W. B.
Supercharged Airman

5 Sedan	2,345	Vic. Brougham	2,445
Coupe	2,345	7 Sedan	2,545
Con. Coupe	2,390	Speedster	
Club Brougham	2,395	wire wheels)	2,545
Oxford Sedan	2,395	Limousine	2,695

FRANKLIN—12-cyl. 141 W. B.

5 Sedan	3,885	7 Sedan	3,985
Club Brougham	3,885	7 Limousine	4,185

GRAHAM—6-cyl. 113 W. B.

Town Sedan	765	Sedan	795

GRAHAM—8-cyl. 123 W. B.
Standard

2 Coupe	1,095	4 Coupe (R.S.)	1,145
5 Sedan	1,145		

GRAHAM—8-cyl. 123 W. B.
De Luxe

2 Coupe	1,170	4 Coupe (R.S.)	1,220
5 Sedan	1,220	4 Con. Coupe	1,270

HUDSON—8-cyl. 119 W. B.
Standard Series

Business Coupe	995	Standard Sedan	1,095
Coach	1,025	Special Coupe	1,115
4 Coupe	1,045	Con. Coupe	1195
Town Sedan	1,050		

HUDSON—8-cyl. 126 W. B.
Sterling Series

Sur. Sedan	1,275	Special Sedan	1,295

HUDSON—8-cyl. 132 W. B.
Major Series

Touring Sedan	1,445	Club Sedan	1,495
Brougham	1,495	7 Sedan	1,595

HUPMOBILE—216. 6-cyl. 116 W. B.

5 Phaeton	795	Con. Coupe	895
4 Roadster	795	5 Sedan	895
4 Con. Cabriolet	895		

HUPMOBILE—222. 8-cyl. 122 W. B.

2 Coupe (R.S.)	1,295	5 Victoria	1,360
5 Sedan	1,295	5 Cab. Roadster	1,395

HUPMOBILE—226. 8-cyl. 126 W. B.

2 Coupe (R.S.)	1,595	5 Victoria	1,660
5 Sedan	1,595	2 Cabriolet Road.	1,695

LA SALLE—V-8. Series 345 B. 130 W. B.
Fisher Bodies

2 Coupe	2,395	2 Con. Coupe	2,545
5 Sedan	2,495	5 Town Coupe	2,545

LA SALLE—V-8. Series 345 B. 136 W. B.
Fisher Bodies

5 Town Sedan	2,645	7 Imperial	2,795
7 Sedan	2,645		

LINCOLN—8-cyl. 136 W. B.
Standard Models

2 Roadster	2,900	2 Coupe	3,200
4 Phaeton	3,000	5 Victoria	3,200
Town Sedan (2 win.)	3,100	7 Sedan	3,300
5 Sedan	3,200	7 Limousine	3,350

LINCOLN—12-cyl. 145 W. B.
Standard Models

4 Spt. Phaeton	4,300	4 Spt. Phae. (Tonneau cowl)	4,500
7 Spt. Touring	4,300	5 Sedan	4,600
5 Coupe	4,400	7 Sedan	4,700
4 Town Sedan (2 or 3 win.)	4,500	7 Limousine	4,900

LINCOLN—12-cyl. 145 W. B.
Custom Models

2 Con. Road. (R.S.) Le Baron	4,600	5 Con. Sedan Dietrich	6,400
2 Coupe (Dietrich)	5,000	5 Spt. Berline, Dietrich	6,500
2 Coupe, Judkins	5,100	2 Spt. Roadster, Murphy	6,800
2 Coupe (R.S.) Dietrich	5,150	7 Brougham, Brunn	7,000
2 Coupe (R.S.) Judkins	5,350	Town Brougham, Willoughby	7,100
5 Berline, Judkins	5,700	5 Cabriolet (N. C. or S. C.) Brunn	7,200
7 Limousine, Willoughby	5,900	5 Town Cabriolet Le Baron	7,400
5 Con. Victoria, Waterhouse	5,900		

MARMON—8-125. 125 W. B.
Standard Models

5 Sedan (5 wire wheels)	1,395	2 Con. Coupe (5 wire wheels)	1,445
2 Coupe (R. S.) (5 wire wheels)	1,395		

MARMON—8-125. 125 W. B.
De Luxe Models

5 Sedan (6 wire wheels)	1,545	2 Con. Coupe (6 wire wheels)	1,595
2 Coupe (R.S.) (6 wire wheels)	1,545		

MARMON—16-Cyl. 145 W. B.

5 Sedan	5,700	2 Con. Coupe	5,850
2 Coupe (R. S.)	5,700	7 Sedan	5,900
5 2-dr. Coupe	5,800	5 Con. Sedan	5,950
5 Cl Cpl. Sedan	5,800	7 Limousine	6,100

NASH—6-cyl. 116. W. B.
Big Six Models

2 Coupe	777	5 4-dr. Sedan	840
5 4-dr. Town Sedan	825	5 2-dr. Con. Sedan	935
4 Coupe	825	4 Con. Roadster	895

NASH—8-cyl. 121 W. B.
Standard Eight Models

2 Coupe	965	5 4-dr. Sedan	1,015
5 4-dr. Town Sedan	975	4 Con. Roadster	1,055
4 Coupe	1,015	5 2-dr. Con. Sedan	1,095

NASH—8-cyl. 128 W. B.
Special Twin Ignition Eight Models

2 Coupe	1,270	5 4-dr. Sedan	1,320
4 Coupe	1,320	5 Victoria	1,395
4 Con. Road	1,395	5 4-dr. Con Sedan	1,475

NASH—8-cyl. 133 W. B.
Advanced Twin Ignition Eight Models

5 4-dr. Sedan	1,595	5 Victoria	1,785
4 Coupe	1,695	5 4 dr. Con.	
4 Con. Roadster	1,795	Sedan	1,875

NASH—8-cyl. 142 W. B.
Ambassador Twin Ignition Eight Models

5 4-dr. Sedan	1,855	7 Limousine	2,055
5 4dr. Brough	1,855	7 Sedan	1,955

OLDSMOBILE—6-cyl. 116½ W. B.
F-32 Models

2 dr. Sedan	875	4 dr. Sedan	955
Bus Coupe	875	Con Roadster	955
Sport Coupe	925	Patrician Sedan	990

OLDSMOBILE—8-cyl. 116½ W. B.
L-32 Models

2 dr. Sedan	975	4 dr. Sedan	1,055
Bus. Coupe	975	Con. Roadster	1,055
Sport Coupe	1,025	Patrician Sedan	1,090

PACKARD—8-cyl. 128 W. B.
Light Eight

5 Sedan	1,750	2-4 Coupe Road.	1,795
5 Coupe Sedan	1,795	2-4 Coupe	1,795

PACKARD—8-cyl. 130 W. B.
Standard Eight

5 Sedan			2,250

PACKARD—8-cyl. 137 W. B.
(Standard Eight

7 Touring	2,500	5 Club Sedan	2,775
2-4 Coupe	2,595	7 Sedan	2,835
5 Phaeton	2,650	5 Spt. Phaeton	2,950
2-4 Coupe Road.	2,650	7 Sedan Limou.	2,985
5 Sedan	2,685	5 Con. Victoria	3,195
5 Coupe	2,745	5 Con. Sedan	3,250

PACKARD—8-cyl. 142 W. B.
De Luxe Eight

2-4 Coupe	3,150	7 Touring	3,395
5 Sedan	3,245	5 Club Sedan	3,395
2-4 Coupe Road.	3,250	5 Spt. Phaeton	3,590
5 Phaeton	3,290	5 Con. Victoria	3,825
5 Coupe	3,350	5 Con. Sedan	3,895

PACKARD—8-cyl. 147 W. B.
De Luxe Eight

7 Sedan	3,495	7 Sedan Limou.	3,695

PACKARD—Twin Six. 142 W. B.

2-4 Coupe	3,650	5 Club Sedan	3,895
5 Sedan	3,745	7 Touring	3,895
2-4 Coupe Road.	3,750	5 Spt. Phaeton	4,090
5 Phaeton	3,790	5 Con. Victoria	4,325
5 Coupe	3,850	5 Con. Sedan	4,395

PACKARD—Twin Six. 147 W. B.

7 Sedan	3,995	7 Sedan Limou.	4,195

PACKARD—8-cyl. 142-147 W. B.
Le Luxe Custom Models

Spt. Phaeton (Dietrich)	5,500	Sedan Limou.	6,550
Stationary Coupe (Dietrich)	5,600	A. W. Brougham	6,550
Con. Roadster (Dietrich)	5,750	Sport Sedan	6,550
Con. Victoria (Dietrich)	5,850	Cebriolet Sedan Limousine	6,550
Con. Sedan (Dietrich)	5,950	A. W. Town Car	6,550
A. W. Sport Cabriolet	6,550	A. W. Cabriolet	6,550
		A. W. Town Car Landaulet	6,950
		A. W. Landaulet	6,950
		A. W. Sport Landaulet	6,950

PACKARD—Twin Six. 142-147 W. B.
Custom Models

Sport Phaeton (Dietrich)	6,000	Con. Sedan (Dietrich)	6,450
Stationary Coupe (Dietrich)	6,100	A. W. Town Car	7,050
Con. Roadster (Dietrich)	6,250	A. W. Cabriolet	7,050
Con. Victoria (Dietrich)	6,350	A. W. Town Car Landaulet	7,450
		A. W. Landaulet	7,450

PEERLESS—8-cyl. 125 W. B.
De Luxe Master

5 Sedan	2,320	Club Sedan	2,370
2 Coupe	2,320	Cabriolet	2,430

PEERLESS—8-cyl. 138 W. B.
De Luxe Custom

5 Sedan	2,985	7 Sedan	3,135
5 Club Sedan	3,035	7 Limousine	3,335

PIERCE ARROW—54. 137 W. B.

5 Club Brougham	2,850	5 Club Sedan	3,150
5 Sedan	2,985	5 Tourer	3,150
4 Coupe	2,985	5 Club Berline	3,350
4 Con. Coupe Roadster	3,100	5 Spt. Phaeton	3,350
		5 Con. Sedan	3,450

PIERCE ARROW—54. 142 W. B.

7 Sedan	3,185	7 En. Dr. Limousine	3,450
7 Tourer	3,450		

PIERCE ARROW—53. 137 W. B.

5 Club Brougham	3,650	5 Club Sedan	3,950
5 Sedan	3,785	5 Tourer	3,950
4 Coupe	3,785	5 Club Berline	4,150
4 Con. Coupe Roadster	3,900	5 Spt. Phaeton	4,150
		5 Con. Sedan	4,250

PIERCE ARROW—53. 142 W. B.

7 Sedan	3,985	7 En. Dr. Limousine	4,250
7 Tourer	4,250		

PIERCE ARROW—52. 142 W. B.

5 Sedan	4,295	5 Club Berline	4,600
5 Club Sedan	4,400		

PIERCE ARROW—52. 147 W. B.

7 Sedan	4,535	7 En. Dr. Limousine	4,800

PIERCE ARROW—51. 147 W. B.
Custom Models

Con. Victoria (Le Baron)	5,200	En. Dr. Limousine (Le Baron)	6,200
Coupe (Le Baron) (metal back)	5,300	Town Brougham (Brunn)	6,700
Coupe (Le Baron) (leather back)	5,600	Town Car (Brunn)	6,750
Club Sedan (Le Baron)	5,700	Town Cabriolet (Brunn)	7,200
Con. Sedan (Le Baron)	5,700	En. Dr. Lim. Brougham (Brunn)	7,200
Con. Sedan (Le Baron)	6,100		

PLYMOUTH—4-cyl. 112 W. B.

Bus. Roadster	495	4-dr. 3 win. Sedan	635
Bus. Coupe	565	Con. Coupe	645
Spt. Roadster (R. S.)	595	7 Sedan (121-in. W. B.)	725
Spt. Phaeton	595	Con. Sedan	785
Coupe (R. S.)	610		

PLYMOUTH—4-cyl. *170 O. A.
Thrift Models

5 2-dr. Sedan	495	5 4-dr. Sedan	575

PONTIAC—6-cyl. 114 W. B.

2 Stan. Coupe	635	5 4-dr. Sedan	725
5 2-dr. Sedan	645	2 Con. Coupe	765
4 Coupe (R.S.)	715	5 Custom Sedan	795

PONTIAC—V-8. 117 W. B.

2 Stan. Coupe	845	Con. Coupe	945
2 Dr. Sedan	845	4 Dr. Sedan	945
4 Coupe (R.S.)	925	Custom Sedan	1,025

REO—MODEL S—117 W. B.
Flying Cloud

5 Stan. Sedan	995	Stan. Convertible Coupe	995
Coupe	995	Coupe	1,045

REO—8-25. 8-cyl. 125 W. B.

Coupe	1,565	Sedan	1,565
Victoria	1,565		

REO ROYALE—8-cyl. 131 W. B.

Sedan Victoria	1,785	Coupe	1,785

REO ROYALE—8-cyl. 135 W. B.
Custom Models

Sedan	2,445	Con. Coupe	2,445
Coupe	2,445		

ROCKNE—6-65. 6-cyl. 110 W. B.
Standard Models

2 Coupe	585	5 Sedan	635
Coach	595	Conv. Roadster	675
4 Coupe	620	Conv. Sedan	695

ROCKNE—6-65. 6-cyl. 110 W. B.
De Luxe Models

2 Coupe	630	5 Sedan	680
Coach	640	Conv. Roadster	720
4 Coupe	665	Conv. Sedan	740

ROCKNE—6-75. 6-cyl. 114 W. B.
Standard Models

2 Coupe	685	Conv. Roadster	775
4 Coupe	720	Conv. Sedan	795
5 Sedan	725		

ROCKNE—6-75. 6-cyl. 114 W. B.
De Luxe Models

2 Coupe	730	Conv. Roadster	820
4 Coupe	765	Conv. Sedan	840
5 Sedan	780		

STUDEBAKER—6-cyl. 117 W. B.

2 Coupe	840	4 Regal Coupe	995
4 Coupe	890	5 Regal St. Regis Brougham	1,020
5 St. Regis Brougham	915	5 Regal Sedan	1,020
5 Sedan	915	4 Regal Con. Roadster	1,020
4 Con. Roadster	915	5 Regal Con. Sedan	1,090
2 Regal Coupe	945		
5 Con. Sedan	985		

STUDEBAKER—8-cyl. 117 W. B.
Dictator Models

2 Coupe	980	4 Regal Coupe	1,135
4 Coupe	1,030	5 Regal St. Regis Brougham	1,155
5 St. Regis Brougham	1,050	5 Regal Sedan	1,155
5 Sedan	1,050	4 Regal Con. Roadster	1,155
4 Con. Roadstr.	1,050	5 Regal Con. Sedan	1,125
2 Regal Coupe	1,085		
5 Con. Sedan	1,125		

STUDEBAKER—8-cyl. 125 W. B.
Commander Models

4 Coupe	1,350	5 Regal Sedan	1,550
4 Con. Roadstr.	1,445	4 Regal Con. Roadster	1,550
5 Sedan	1,445	5 Con. Sedan	1,560
5 St. Regis Brougham	1,445	5 Regal Con. Sedan	1,685
4 Regal Coupe	1,455		
5 Regal St. Regis Brougham	1,550		

STUDEBAKER—8-cyl. 135 W. B.
President Models

4 Coupe	1,690	4 State Con. Roadster	1,855
5 St. Regis Brougham	1,750	5 Con. Sedan	1,880
5 Sedan	1,750	7 Sedan	1,890
4 Con. Roadstr.	1,750	5 State Con. Sedan	1,985
4 State Coupe	1,795	7 Limousine	1,990
5 State St. Regis Brougham	1,855	7 State Sedan	1,995
5 State Sedan	1,855	7 State Limous	2,095

STUTZ—6 cyl. 127½ W. B.
LAA Series

5 Coupe	1,895	Club Sedan	1,895
5 Sedan	1,895	Cab. Co